

No. 14578

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United States  
Court of Appeals  
for the Ninth Circuit

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EDCLIFF INSTRUMENTS, a Corporation,  
EDMUND W. PITZER and CLIFFORD  
DILLON, Appellants,  
vs.

MARLAN E. BOURNS, doing business as Bourns  
Laboratories, Appellee.

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Transcript of Record

In Two Volumes  
VOLUME I.

(Pages 1 to 477, inclusive.)

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Appeal from the United States District Court for the Southern  
District of California, Central Division

FILED  
MAR 10 1955

PAUL P. O'BRIEN,  
CLERK



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Court of Appeals  
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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in *italic*; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in *italic* the two words between which the omission seems to occur.]

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\* Page numbers appearing at foot of page of original Transcript of Record.







In the United States District Court for the Southern District of California, Central Division

Civil Action No. 14764-Y.

MARLAN E. BOURNS, doing business under the fictitious firm name and style of Bourns Laboratories, Plaintiff,

vs.

EDCLIFF INSTRUMENTS, EDMUND W. PITZER and CLIFFORD DILLON, Defendants.

### AMENDED COMPLAINT

Comes Now the plaintiff through its attorneys and for cause of action against the defendants alleges:

#### Count I.

1. That plaintiff Marlan E. Bourns is a citizen of the United States and a resident of the city of Riverside, County of Riverside and State of California.

2. That defendant Edcliff Instruments is a corporation organized and existing under and by virtue of the laws of the State of California, and having a principal place of business and a regular and established place of business at 850 South Fair Oaks, city of Pasadena, County of Los Angeles and State of California.

3. That defendants Edmund W. Pitzer and Clifford Dillon are citizens of the United States, resi-

dents of Altadena, in the County of Los Angeles, State of California. [2]

4. That the acts of infringement complained of herein have taken place in said city of Pasadena, County of Los Angeles, State of California, within the Southern District of California and elsewhere throughout the United States.

5. That jurisdiction of this Court is founded upon the fact that this is an action arising under the Patent Laws of the United States and a related action for unfair competition joined therewith, jurisdiction of this Court lying under Title 28, U. S. Code, Section 1338.

6. That Letters Patent of the United States No. 2,515,980 were duly and legally issued to plaintiff on July 18, 1950, and since said date plaintiff has been and still is the owner of said Letters Patent.

7. That Letters Patent of the United States No. 2,515,981 were duly and legally issued to plaintiff on July 18, 1950, and since said date plaintiff has been and still is the owner of said Letters Patent.

8. That defendants and each of them jointly and severally have, during the past six (6) years, deliberately and willfully infringed said Letters Patents Nos. 2,515,980 and 2,515,981 by manufacturing, using and selling potentiometers embodying the inventions claimed in said patents and will continue to so infringe to the irreparable damage of plaintiff unless restrained by this Court.

9. That plaintiff has given defendants written notice of their infringement.

10. That defendant Edmund W. Pitzer deliberately and willfully conspired with defendant Clifford Dillon to cause the organization of defendant Edcliff Instruments for the purpose of infringing said Letters Patents Nos. 2,515,980 and 2,515,981.

11. That pursuant to said conspiracy, defendants have manufactured and sold and offered for sale to plaintiff's customers [3] potentiometers which infringe upon said Letters Patent and each of them.

\* \* \* \* \*

Wherefore, plaintiff prays:

1. For a preliminary and permanent injunction restraining defendants and each of them from directly or indirectly infringing said Letters Patents of the United States Nos. 2,515,980 and 2,515,981.

\* \* \* \* \*

3. For an accounting and recovery of damages for said infringement of said Letters Patents of the United States Nos. 2,515,980 and 2,515,981.

4. For an accounting and recovery of damages on account of the disclosure and use by defendants of plaintiff's confidential and secret fabrication techniques, trade secrets and know-how. [5]

5. That the damages as found aforesaid for infringement of said Letters Patents of the United States Nos. 2,515,980 and 2,515,981 be trebled.

6. For an assessment and awarding of costs and

reasonable attorneys' fees against defendants and for such other and further relief as to this Court may seem just and proper.

/s/ LYON & LYON,  
/s/ By CHARLES G. LYON,  
Attorneys for Plaintiff

[6]

[Endorsed]: Filed January 23, 1953.

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[Title of District Court and Cause.]

### ANSWER

The Defendants, Edmund W. Pitzer, Clifford Dillon and Edcliff Instruments, a corporation, and each of them, for answer to the Amended Complaint on file herein, admit, deny and allege as follows:

#### Count I.

1. Answering paragraph 1, allege that they are without knowledge or information sufficient to form a belief as to the allegations therein contained, and placing their denials on that ground, deny each and every such allegation.

2. Answering paragraph 2, admit that defendant Edcliff [8] Instruments is a corporation organized and existing under and by virtue of the laws of the State of California: deny that said corporation has a principal place of business or a regular and established place of business at 850 South Fair Oaks in the City of Pasadena, County of Los Angeles, State of California, and allege that said corporation has its principal place of business at 383 North



Foothill Boulevard in the City of Pasadena, County of Los Angeles, State of California.

3. Answering paragraph 3, admit the allegations therein contained.

4. Answering paragraph 4, deny each and every allegation therein contained excepting only admit and allege that defendants Dillon and Pitzer, as copartners under the firm name and style, Edcliff Instruments, did, from December, 1950, until May, 1952, and defendant Edcliff Instruments, a corporation, has, from May, 1952, to the date hereof, manufactured and sold potentiometers in the City of Pasadena, County of Los Angeles, State of California, and within the Southern District of California and elsewhere throughout the United States.

5. Answering paragraph 5, admit that in so far as Count I of said Amended Complaint relates to the issue of alleged patent infringement it arises under the patent laws of the United States; deny that there is stated in Count II of said Amended Complaint a claim for unfair competition related to said issue of alleged patent infringement or to any alleged cause of action in any way related to said issue of alleged infringement of United States Letters Patents No. 2,515,980 or No. 2,515,981 and therefore allege that Title 28, United States Code, Section 1338, does not confer upon this court jurisdiction to hear matters alleged by plaintiff in Count II of said Amended Complaint to comprise acts of unfair competition.

6. Answering paragraph 6, deny each and every allegation therein contained excepting only admit

that Letters Patent of the [9] United States No. 2,515,980 were issued to plaintiff on July 18, 1950; specifically deny that said Letters Patent were duly or legally issued to plaintiff in that said Letters Patent are invalid and void as more particularly hereinafter alleged in paragraphs 17 and 18 hereof.

7. Answering paragraph 7, deny each and every allegation therein contained excepting only admit that Letters Patent of the United States No. 2,515,981 were issued to plaintiff on July 18, 1950; specifically deny that said Letters Patent were duly or legally issued to plaintiff in that said Letters Patent are invalid and void as more particularly hereinafter alleged in paragraphs 12, 13, 14 and 15 hereof.

8. Answering paragraph 8, deny generally and specifically each and every allegation therein contained.

9. Answering paragraph 9, deny that plaintiff has given defendants, or any of them, any notice, written or otherwise, of their alleged infringement excepting only for the notice contained in the Complaint and Amended Complaint herein.

10. Answering paragraph 10, deny each and every allegation therein contained excepting only admit that defendants Edmund W. Pitzer and Clifford Dillon caused the organization and incorporation of defendant Edcliff Instruments.

11. Answering paragraph 11, deny each and every allegation therein contained excepting only admit that defendants have manufactured and sold and offered for sale potentiometers to persons or

firms which have also purchased potentiometers from plaintiff. [10]

\* \* \* \* \*

### Second Separate Defence

13. United States Patent No. 2,515,981 is invalid and void in that the subject matter thereof is not an invention and the claim thereof fails to recite an invention as required by Sections 100 and 101 of Title 35 of the United States Code, and in this connection no inventive act was performed by the named inventor in said patent in developing the alleged invention, and said named inventor did nothing involving anything more than the exercise of mere mechanical skill in view of the state of the art existing in this country at the time of, and long prior to, said alleged invention.

### Third Separate Defense

14. United States Patent No. 2,515,981 is invalid and void in that prior to any supposed invention or discovery by plaintiff, the thing or things as alleged to be patented by said United States Patent No. 2,515,981 had been patented or described in certain printed publications or Letters Patent before the alleged invention [11] or discovery thereof by plaintiff.

### Fourth Separate Defense

15. The single claim of United States Patent No. 2,515,981 cannot be given an interpretation or construction which will include any structure or device made, used or sold by these defendants, and if the claim be so interpreted and construed as to include

within its purview any structures or devices of these defendants', then said claim is anticipated and invalid in view of the state of the art existing in this country at the time of, and long prior to, the alleged invention defined in said claim.

#### Fifth Separate Defense

16. The single claim of United States Patent No. 2,515,981 is ambiguous and therefore invalid and said patent is void unless the terms of said claim are construed and defined as in the specification and the history of the prosecution of the application for said patent, and if so construed and defined said claim will be legally susceptible only of such narrow interpretation, meaning and scope that none of the devices actually or intended to be manufactured, used or sold by these defendants can justly or lawfully be held to constitute infringement of said claim.

\* \* \* \* \*

#### Tenth Separate Defense

21. All of the potentiometers manufactured or sold by defendants Edmund W. Pitzer or Clifford Dillon, or either of them, have been sold and delivered by them to the United States Government, or to contractors or subcontractors for the United States Government and either delivered to the United States Government or used by said contractors or subcontractors for, and with the authorization or consent of, the United States Government, and said defendants have not used any potentiometers.



22. All of the potentiometers manufactured or sold by defendant Edcliff Instruments, with the exception of 5 Model A potentiometers, 2 Model F potentiometers, and 1 Model D potentiometer, have been sold and delivered by it to the United States Government, or to contractors or subcontractors for the United States Government and either delivered to the United States Government or used by said contractors or subcontractors for, and with the authorization or consent of, the United States Government, and said defendant has not used any potentiometers.

23. Under and pursuant to the provisions of Section 1498 of Title 28 of the United States Code, plaintiff's sole remedy for any alleged infringement relating to the said sales of potentiometers to the United States Government, its contractors or subcontractors as hereinabove alleged, is against the United States Government in the Court of Claims, and this Court is without jurisdiction over the subject matter of said alleged acts of infringement.

\* \* \* \* \* [14]

JAMES B. CHRISTIE,  
ROBERT L. PARKER, JR.  
GIBSON, DUNN & CRUTCHER,  
SAMUEL O. PRUITT, JR.,  
F. DANIEL FROST III  
GLENN WARNER,

/s/ By GLENN WARNER,

Attorneys for Defendants Edcliff Instruments, Edmund W. Pitzer and Clifford Dillon. [16]

[Endorsed]: Filed June 3, 1953.

[Title of District Court and Cause.]

## AMENDED COUNTERCLAIMS

\* \* \* \* \*

### Counterclaim IV.

Defendants Edmund W. Pitzer, Clifford Dillon and Edcliff Instruments, a corporation, and each of them, for a fourth counterclaim against plaintiff, Marlan E. Bourns, and against defendants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc., and each of them, allege:

1. This counterclaim is filed, and the jurisdiction of this Court is invoked, under the provisions of the Patent Laws of the United States, and under the laws providing for declaratory judgments, including Section 2201 of Title 28 of the United States Code.

2. On or about November 17, 1952, plaintiff herein, through his attorney, directed letters to the Bendix Aviation Corporation and to Douglas Aircraft Co. Inc., both customers of defendant Edcliff Instruments, alleging that said Bendix Aviation Corporation and said Douglas Aircraft Co. Inc., by use of "linear motion potentiometers" purchased from defendant Edcliff Instruments, would infringe said United States Patent No. 2,515,981, whereby plaintiff attempted to induce these customers to discontinue the purchase of linear motion potentiometers from said defendant.

3. That the present action for infringement was instituted by plaintiff against these defendants by

filing a complaint in this action on or about November 21, 1952, and that on or about January 23, [27] 1953, plaintiff filed the Amended Complaint herein in which he alleged the infringement by these defendants in the manufacture, use and sale of potentiometers, of United States Patents No. 2,515,981 and No. 2,515,980, and each of them, alleged by plaintiff to be his property; that in answering the Amended Complaint on file herein, defendants allege as their tenth affirmative defense that all of the potentiometers made, used or sold by them, excepting only eight (8) such potentiometers, have been sold to the United States Government, its contractors or subcontractors; that under the provisions of Section 1498 of Title 28 of the United States Code, plaintiff's sole remedy with respect to the alleged infringement by the potentiometers thus sold to the United States Government, its contractors or subcontractors, is against the United States in the Court of Claims.

4. That these defendants are entitled to a decision by this Court on the issue of infringement of United States Patents No. 2,515,981 and No. 2,515,980 by the products of these defendants, and on the issue of validity of said patents, so that the business of defendant Edcliff Instruments of selling potentiometers will not be interfered with by reason of plaintiff's suit or threats to sue the United States Government or customers who purchase potentiometers from said defendant.

5. That there is an actual controversy now existing between the parties hereto with respect to

which these defendants need and request a declaration of their rights by this Court in that, among other things:

(a) These defendants contend and maintain, and the plaintiff Marlan E. Bourns and defendants Bourns Position Instruments, Inc. and Bourns Laboratories Instruments Sales Corporation deny, that they have not infringed and do not infringe United States Patents No. 2,515,981 or No. 2,515,980, or either of them, by their manufacture, use or sale of potentiometers.

(b) These defendants contend and maintain, and plaintiff [28] Marlan E. Bourns and defendants Bourns Position Instruments, Inc. and Bourns Laboratories Instruments Sales Corporation deny, that United States Patent No. 2,515,981 is invalid and void for the reason that it does not disclose a patentable invention in view of the state of the art at and prior to the time that United States Patent Application Serial No. 9,697 was filed by plaintiff and with relation to which said United States Patent No. 2,515,981 is a division.

(c) These defendants contend and maintain, and plaintiff Marlan E. Bourns and defendants Bourns Position Instruments, Inc. and Bourns Laboratories Instruments Sales Corporation deny, that United States Patent No. 2,515,981 is invalid and void in that prior to any supposed invention or discovery by plaintiff, the thing or things as alleged to be patented by said United States Patent No. 2,515,981 have been patented or described in certain printed



publications or Letters Patent before the alleged invention or discovery thereof by plaintiff.

(d) These defendants contend and maintain, and plaintiff Marlan E. Bourns and defendants Bourns Position Instruments, Inc. and Bourns Laboratories Instruments Sales Corporation deny, that United States Patents No. 2,515,981 and No. 2,515,980, and each of them, are invalid and void under the provisions of Section 102(b) of Title 35 of the United States Code, because the alleged invention or inventions purported to be patented therein were, for more than one year prior to any application for United States Patent for said alleged inventions, in public use and sale in the United States by said Marlan E. Bourns and others.

(e) These defendants contend and maintain, and plaintiff Marlan E. Bourns and defendants Bourns Position Instruments, Inc. and Bourns Laboratories Instruments Sales Corporation deny, that the respective claims of United States Patents No. 2,515,981 and No. 2,515,980, and each of them, cannot be given an interpretation or a construction which will include any structure or device made or sold by these [29] defendants, and that is said claims be so interpreted and construed as to include within their purview any of said structures or devices, then said claims are anticipated and invalid in view of the state of the art existing in this country at the time of, and long prior to, the alleged inventions defined in said claims.

(f) These defendants contend and maintain, and plaintiff Marlan E. Bourns and defendants Bourns

Position Instruments, Inc. and Bourns Laboratories Instruments Sales Corporation deny, that the claim of United States Patent No. 2,515,981 and the claims of United States Patent No. 2,515,980 must be so narrowly construed as to be incapable of being validly applied to any potentiometers manufactured, used or sold by the defendants. [30]

\* \* \* \* \*

JAMES B. CHRISTIE,  
ROBERT L. PARKER, JR.  
GIBSON, DUNN & CRUTCHER,  
SAMUEL O. PRUITT, JR.,  
F. DANIEL FROST III,

/s/ By GLENN WARNER by Bill Clark  
Attorneys for Defendants Edcliff Instruments, Edmund W. Pitzer and Clifford Dillon. [34]

[Endorsed]: Filed November 2, 1953.

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[Title of District Court and Cause.]

REPLY OF PLAINTIFF TO COUNTER-  
CLAIM IV.

\* \* \* \* \* [36]

Counterclaim IV.

1. Answering paragraph 1 of said Counterclaim, plaintiff and defendants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. admit that defendants invoke the jurisdiction of this Court, as alleged therein.

2. Answering paragraph 2, plaintiff and defend-

ants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. admit the allegations contained therein.

3. Answering paragraph 3, plaintiff and defendants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. specifically deny the allegations of the alleged tenth affirmative defense of defendants to the effect that all of the potentiometers made, used or sold by them, excepting only eight, have been sold to the United States Government, its contractors or subcontractors. Further answering said paragraph, plaintiff and defendants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. admit the remaining allegations contained therein [40]

4. Answering paragraph 4, plaintiff and defendants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. admit that defendants, and allege that plaintiff as well, are entitled to a decision by this Court on the issue of infringement of United States Letters Patent No. 2,515,981 and No. 2,515,980 by the products of defendants, and on the issue of validity of said patents. Further answering said paragraph, plaintiff and defendants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. deny each and every other allegation contained therein.

5. Answering paragraph 5, plaintiff and defendants Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. ad-

mit that an actual controversy exists between the parties hereto with respect to the issues of validity and infringement of patents No. 2,515,981 and No. 2,515,980. \* \* \* \* \* [41]

/s/ LYON & LYON,

/s/ By LOUIS E. LYON,

Attorneys for Plaintiff and for Defendants on Counterclaims Bourns Laboratories Instruments Sales Corporation and Bourns Position Instruments, Inc. [42]

[Endorsed]: Filed December 14, 1953.

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[Title of District Court and Cause.]

NOTICE OF MOTION FOR A PARTIAL SUMMARY JUDGMENT AND FOR AN ORDER OF DIRECTION AS TO FURTHER PROCEEDINGS AND REASONS AND POINTS AND AUTHORITIES IN SUPPORT THEREOF

To the Plaintiff, Marlan E. Bourns, and to Lyon & Lyon and Lewis E. Lyon, Esq., his Attorneys of Record:

Please take notice that on Monday, the 25th day of January, 1954, at the hour of 10:00 o'clock a.m. or as soon thereafter as counsel may be heard, in the courtroom of Judge Leon R. Yankwich, in the United States Post Office and Court House Building, Spring and Temple streets, Los Angeles, California, the defendants Edcliff Instruments, a cor-



poration, Edmund W. Pitzer and Clifford Dillon, and each of them, will move the above entitled Court as follows:

(a) For a summary judgment (interlocutory in character) in favor of said defendants, and each of them, for the following parts of the claims asserted by the plaintiff, Marlan E. Bourns, in his Amended Complaint herein, as to each of which parts there is no genuine issue of fact material to the disposition thereof and as to which the sole remedy available to the plaintiff is by way of an action for damages against the United States Government in the Court of Claims pursuant to the provisions of Section 1498 of Title 28 of the United States Code:

(1) That part of plaintiff's claims which seek an accounting and damages for the alleged infringement by the defendants, and each of them, of Letters Patent of the United States No. 2515980 and No. 2515981 to the extent that said alleged infringements arose out of the manufacture of potentiometers for the United States Government and with the authorization and consent of the United States Government;

(2) That part of plaintiff's claims which seek a preliminary and permanent injunction restraining defendants, and each of them, from directly or indirectly infringing Letters Patent of the United States No. 2515980 and No. 2515981 to the extent that said alleged infringement may [45] arise out of the manufacture of potentiometers for the United States Government and with the authorization and consent of the United States Government.

(b) For an order, with respect to the hereinabove specified parts of the claims asserted by the plaintiff in his Amended Complaint herein, specifying (i) that the facts material to the disposition thereof are without substantial controversy, and (ii) that plaintiff is barred by the provisions of Section 1498 of Title 28 of the United States Code from asserting any of said claims against these defendants, or any of them, and directing that all further proceedings herein shall be conducted accordingly.

This motion will be made and based upon this Notice of Motion, upon Rule 56 of the Federal Rules of Civil Procedure, upon the affidavits of Clifford Dillon, Edmund W. Pitzer, Raymond E. Bossarte, Marion J. Kruzic, Clyde V. Grant, Jr., Frederick E. MacArthur, Jr., Ed Deardorff, John C. Werner, and Leonard Comegys filed concurrently herewith, upon the Statement of Points and Authorities attached hereto, upon the Amended Complaint, and upon all the files and records in the above entitled action.

Dated at Los Angeles, California, this 15th day of January, 1954.

JAMES B. CHRISTIE

ROBERT L. PARKER, JR.

GIBSON, DUNN & CRUTCHER

SAMUEL O. PRUITT, JR.

F. DANIEL FROST III

GLENN WARNER

/s/ By GLENN WARNER

Attorneys for defendants, Edcliff Instruments, Edmund W. Pitzer and Clifford Dillon. [46]

Points and Authorities in Support of Defendants'  
Motion for Summary Judgment

Preliminary Statement

Plaintiff's Amended Complaint consists of two counts, the first of which purports to state a claim against defendants for infringement of United States Letters Patent No. 2515980 and No. 2515981. The second count purports to state a claim for relief arising out of the alleged appropriation by the defendants of unspecified "confidential and secret fabrication techniques, trade secrets and know-how" which were allegedly owned by the plaintiff. This Motion is addressed only to the first count and to the relief requested by the plaintiff for the acts complained of therein.

The affidavits filed concurrently herewith in support of the motion herein show (i) that neither of defendants Clifford Dillon nor Edmund W. Pitzer has manufactured or sold potentiometers except in his capacity as a partner in Edcliff Instruments, a co-partnership, or as an officer and director of its successor corporation, Edcliff Instruments, one of the defendants herein; (ii) that all potentiometers manufactured or sold by Edcliff Instruments, a co-partnership, were manufactured for, and sold to, the United States Government or to contractors or subcontractors for the United States Government under contracts issued by the United States Government, and that Edcliff Instruments, a co-partnership, acted as a contractor or subcontractor for the United States Government in said manufacture

and sale of potentiometers; and (iii) that, except for the sale of fourteen potentiometers to civilians for civilian use, all potentiometers manufactured or sold by defendant Edcliff Instruments, a corporation, were manufactured for, and sold to, the United States Government or to contractors or subcontractors for the United States Government under contracts issued by the United States Government and that Edcliff Instruments, a corporation, acted as a contractor or subcontractor for the United States Government in said manufacture and sale of potentiometers. It is, [47] therefore, abundantly clear that all potentiometers manufactured by the defendants herein were manufactured for or used by the United States Government, save for fourteen potentiometers sold by defendant Edcliff Instruments, a corporation, to civilian purchasers for civilian use, which sales are more particularly described in the affidavit of Clifford Dillon filed concurrently herewith.

For these reasons, the defendants respectfully submit that Section 1498 of Title 28 of the United States Code limits the issues relative to patent infringement for determination by this Court under the Amended Complaint to (i) whether or not the potentiometers sold by defendant Edcliff Instruments, a corporation, to civilian purchasers for civilian use infringe upon plaintiff's patent and, if so, the extent plaintiff has been damaged by said sales and (ii) whether or not defendants should be enjoined from making sales of potentiometers to civilians for civilian use. If plaintiff would seek a



remedy arising out of any other sales of potentiometers by defendants, or any of them, that statute compels him to seek that remedy against the United States Government in the Court of Claims and not here.

1. Section 1498 of Title 28 of the United States Code provides that a patentee's sole remedy for an alleged infringement of patents arising out of the manufacture or use of a device by a Government subcontractor for the United States Government shall be by an action against the United States Government in the Court of Claims.

The language of Section 1498 of Title 28 of the United States Code is clear and unambiguous. That section provides, in part, as follows:

“Sec. 1498. Patent Cases

“Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

“For the purposes of this section, the use or manufacture of an invention described in and covered by a patent of the United States by a contractor, a subcontractor, or any person, firm or corporation for the Government and with the authorization or consent of the Government, shall be construed as use or manufacture for the United States.”

The courts have repeatedly held that this statute takes away the right of a patentee to sue a Government contractor or subcontractor for infringement if the alleged infringement resulted from the manufacture of a device for the United States Government, and the patentee's sole remedy is against the United States in the Court of Claims.

Richmond Screw Anchor Company, Inc., vs.  
United States (1928), 275 U.S. 331, 72 L.Ed.  
303

Pollen vs. Ford Instrument Co. (2nd Cir. 1940),  
108 F.2d 762

Bereslavsky vs. Esso Standard Oil Co. (4th  
Cir. 1949), 175 F.2d 148

Hazeltine Corporation vs. General Electric Co.  
(D.C. Md. 1937), 19 F. Supp. 898 [49]

In its original form, Section 1498 applied only to prime contractors who dealt directly with the Federal Government. Even then, however, its purpose was clear—to assure to the Federal Government a free and unimpeded flow of essential war goods by prohibiting patent infringement suits against Government contractors. The United States Supreme Court adopted this interpretation of the statute in forceful and unequivocal language when it observed:

“\* \* \* The intention and purpose of Congress in the Act of 1918 was to stimulate contractors to furnish what was needed for the war, without fear of becoming liable themselves for infringements to inventors or the owners or assignees of patents. The letter of the Assistant Secretary of the Navy,

upon which the Act of 1918 was passed, leaves no doubt that this was the occasion for it. To accomplish this governmental purpose, Congress exercised the power to take away the right of the owner of the patent to recover from the contractor for infringements \* \* \*''

Richmond Screw Anchor Company, Inc. vs.  
United States, 275 U.S. 331, 72 L.Ed. 303,  
308

In 1942 the statute was cast in its present form so as to include subcontractors within its purview. The amending language appears in the second paragraph of Section 1498 which provides that the statute shall apply to subcontractors who manufacture a device for the Government and with the authorization or consent of the Government. It is particularly significant to observe that this language was not designed to narrow the scope of the statute but, quite to the contrary, to broaden its application by extending its benefits to subcontractors, as well as prime contractors, of the Federal Government. That this was the purpose of the amendment is well expressed [50] by the court in *Bereslavsky vs. Esso Standard Oil Co.*, supra, (4th Cir. 1949), 175 F.2d 148, which quoted with approval from an opinion of the Judge Advocate General as follows:

“ ‘A review of the history of this section, both before and during its pendency before the Congress, discloses that its sole and only purpose was to broaden the scope of the act of June 25, 1910, as

amended, so to *to* remove any further doubt that subcontractors and other suppliers of goods and materials to the government were included within the terms of that act to the same extent as prime contractors to the Government were; a construction previously admitted to be true by all parties concerned. Nothing in the wording of the section itself, or in its legislative history, contemplated any limitation on the scope of the act of June 25, 1910, as amended, or indicated the attachment of any conditions where were not existent before its passage \* \* \*” (Emphasis added)

Bereslavsky vs. Esso Standard Oil Co., 175  
F.2d 148, 150-151

Similarly, the court in *Drexler vs. Koza* (D.C. Pa. 1950), 88 F. Supp. 298, in referring to the purpose of the amendment, observed:

“For while the quoted provision undoubtedly applies to 28 U.S.C.A. § 1498, since the latter is but a codification of the Act of 1910 as amended, it is clear that it was intended to broaden, rather than to narrow, the scope of that statute. *Bereslavsky vs. Standard Oil Co. of New Jersey*, D. C. 82 [51] F. Supp. 939, 944, and legislative history referred to therein. In other words, Section 6 of the Royalty Adjustment Act brought within the scope of what is now 28 U.S.C.A. § 1498 the manufacture and use of infringing devices by contractors, subcontractors or other persons for the Government, even though



such devices were not actually used by the Government itself, but only if such manufacture or use was with the authorization or consent of the Government. Obviously use by the Government itself implies consent and express consent need not be shown.” (Emphasis added)

Drexler vs. Koza, 88 F. Supp. 298, 300

2. All potentiometers manufactured by defendants herein with the exception of fourteen potentiometers manufactured for and delivered to civilians for civilian use have been manufactured with the authorization and consent of the United States Government.

The key to a determination of the applicability of Section 1498 is whether or not the allegedly infringing device was manufactured with the authorization and consent of the United States Government. If so, then no claim of patent infringement may be asserted in a Federal District Court against the manufacturer. That authorization and consent may appear in a variety of ways. In *Bereslavsky vs. Esso Standard Oil Co.*, supra, (4th Cir. 1949), 175 F.2d 148, plaintiff appealed from a judgment in favor of the defendant in a patent infringement suit. The plaintiff owned a patent on a motor fuel containing a certain compound. The defendant manufactured and delivered such a motor fuel to the Defense Supplies Corp., which was wholly owned by the Reconstruction Finance Corporation. The defendant contended in a motion for summary

judgment that the sales [52] were within the protection of Section 1498. In holding that the processing was with the consent of the Government, the court quoted with approval from an opinion of the Judge Advocate General of the Army:

“‘Authorization or consent’ on the part of the Government may be given in many ways other than by letter or other direct form of communication.  
 \* \* \* the specifications and the contract may be silent with respect to the use of patented inventions. In such event, if the invention for which claim is made is incorporated in the articles delivered to the United States under the terms of the contract, the acceptance of such articles as complying with the terms of the contract, constitutes ‘consent’ by the Government sufficient to bring the articles within the provisions of the Act of June 25, 1910, as amended, *supra*, and forms the basis for the transfer of jurisdiction over any claim for compensation therefor from the District Court to the Court of Claims, \* \* \*

\* \* \* \* \*

“\* \* \* there is no language in the statute which limits its application to cases where the government contracts expressly for what will infringe, but, on the contrary, it applies in any case where the invention of the patent is ‘used or manufactured by or for the United States.’ To limit the application of the statute to cases where officers of the government intentionally contract for patent infringement

would in very large measure defeat its purpose.”

(Emphasis added)

Bereslavsky vs. Esso Standard Oil Co., 175  
F.2d 148, 150, 151 [53]

Similarly, in *Drexler vs. Koza*, supra, (D. C. Pa. 1950), 88 F. Supp. 298, the defendant alleged that certain of the infringing tools were manufactured for and used by the United States, and that the plaintiff's sole remedy was in the Court of Claims. In holding that this contention was correct, and that consent of the Government had been shown by its acceptance and use of the alleged infringing device, the court said:

“The plaintiff urges that the defendants fail to establish that the Government authorized or consented to the supplying of the infringing tools to fill its orders. *Wood vs. Atlantic Gulf & Pacific Co.*, D.C. 296 F. 718, is relied upon by the plaintiff. That case, however, is distinguishable. There the defendant-contractor, in performing a dredging contract for the Government, used an appliance which infringed the patent there in suit. The defendant-contractor had the option of using this or other means for carrying out the contract. The patented appliance was not embodied in any product delivered to the Government, nor was it manufactured for the Government. The court, therefore, held that the defendant-contractor's use of it under the circumstances was not use for the Government. Here the charge of infringement is against the very tools which were delivered to the Government for its use. \* \* \*

“\* \* \* Obviously use by the Government itself implies consent and express consent need not be shown.” (Emphasis added)

Drexler vs. Koza, 88 F. Supp. 298, 299, 300 [54]

A court, then, must look to determine what indicia of consent appear from the facts of each case from which it can conclude that the device in issue was manufactured “with the authorization and consent” of the United States Government. The affidavits filed concurrently herewith reveal that the United States Government has manifested its consent to the manufacture by defendants of potentiometers which plaintiff claims infringe upon his patent by (i) issuing its own purchase orders for said potentiometers directly to defendant Edcliff Instruments or its predecessor company (affidavit of Clifford Dillon); (ii) inserting an “authorization and consent” clause in prime contracts under which the potentiometers are manufactured (affidavits of Frederick E. MacArthur, Jr. and Leonard Comegys); (iii) accepting delivery of potentiometers manufactured by defendants (affidavits of Clifford Dillon, John C. Werner and Ed Deardorff) and (iv) authorizing payment for potentiometers manufactured by defendants.

3. The applicability of Section 1498 of Title 28 of the United States Code is properly raised by a Motion for Summary Judgment.

Section 1498, where applicable, is a bar to proceedings in the Federal District Courts for patent infringement. Although it does not afford a basis



for a motion to dismiss for lack of jurisdiction (see *Tinnerman Products vs. Adel Precision Products Corp.* [D.C. W.Va. 1945], 62 F. Supp. 348), it presents an issue which must be determined by the trial court in advance of the trial and which therefore is appropriately considered in a motion for summary judgment.

*Bereslavsky vs. Standard Oil Co. of New Jersey* (D.C.Md. 1949), 82 F. Supp. 939; *aff'd* 175 F.2d 148

*Broome vs. Hardie-Tynes Mfg. Co.* (5th Cir. 1937), 92 F.2d 886 [55]

*Hazeltine Corporation vs. General Electric Co.*, *supra*, (D.C.Md. 1937), 19 F. Supp. 898

Although the defendant Edcliff Instruments and its predecessor company have manufactured several models of potentiometers, they have sold only fourteen potentiometers to civilian purchasers for civilian use. Of these fourteen potentiometers, eight were defendant's Model A, one its Model B, two its Model D, and three its Model F. Defendants contend, therefore, that only those four models may be considered with reference to plaintiff's claim of infringement and to his demand for an injunction and that plaintiff can recover damages, if at all, only for his damages arising out of the sale of those fourteen potentiometers.

If defendants' Motion herein is granted, complex issues of infringement and damages will be eliminated and counsel will be spared from expending needless hours in preparation of those issues which this Court has no jurisdiction to hear. On the other



hand, if defendants' Motion is denied, then both Court and counsel will be compelled to try those issues, after which the Court must decide the issue of jurisdiction which is raised by this Motion.

Under these circumstances, the procedure afforded by Rule 56(b) of the Federal Rules of Civil Procedure providing for an interlocutory summary judgment is singularly appropriate. In this connection the District Court in *Bereslavsky vs. Standard Oil Co. of New Jersey*, *supra*, (D.C. Md. 1949), 82 F. Supp. 939, *aff'd* 175 F.2d 148, stated:

"The object of defendant's motion for summary judgment is to eliminate from the present proceeding the question (1) whether the '100 octane gasoline' was an infringing product, and (2) the matter of damages respecting all sales of defendant's motor fuel to the Government. That it is proper to [56] raise and determine such questions by a motion for summary judgment is well established. See *Sperry Gyroscope Co. vs. Arma Engineering Co.*, 271 U.S. 232, 46 S.Ct. 505, 70 L.Ed. 922; *Broome vs. Hardie-Tynes Mfg. Co.*, 5 Cir., 92 F.2d 886; *Tinnerman Products vs. Adel Precision Products*, D.C., 62 F. Supp. 348; *Hazeltine Corporation vs. General Electric Co.*, D.C., 19 F. Supp. 898 \* \* \*"

*Bereslavsky vs. Standard Oil Co. of New Jersey*, 82 F. Supp. 939, 941-942

See also:

*Lorentz vs. RKO Radio Pictures* (9th Cir. 1946), 155 F.2d 84; *cert. den.* 329 U.S. 727, 91 L.Ed. 629

Velsicol Corp. v. Hyman (D. C. Colo. 1951),  
103 F. Supp. 363

6 Moore, Federal Practice (2d Ed. 1948), p.  
2305

Rule 56 (a), (d), Fed. R. Civ. Proc.

## CONCLUSION

Defendants respectfully submit that the issues of patent infringement relating to the manufacture and sale of potentiometers for the United States Government may not be determined by this Court nor may this Court consider the propriety of enjoining defendants, or any of them, from so manufacturing or selling potentiometers in the future. For these reasons, defendants' Motion for a Summary Judgment should be granted and this Court should issue its order directing that further proceedings shall be limited to the issues presented [57] by the manufacture and sale of potentiometers by defendants to civilians for civilian use.

JAMES B. CHRISTIE

ROBERT L. PARKER, JR.

GIBSON, DUNN & CRUTCHER

SAMUEL O. PRUITT, JR.

F. DANIEL FROST III

GLENN WARNER

/s/ By GLENN WARNER

Attorneys for defendants Edcliff Instruments, Edmund W. Pitzer and Clifford Dillon. [58]

[Endorsed]: Filed January 15, 1954.

[Title of District Court and Cause.]

# AFFIDAVIT OF RAYMOND E. BOSSARTE

State of California,

County of Los Angeles—ss.

Raymond E. Bossarte, being duly sworn, deposes and says:

I am employed by Douglas Aircraft Company, Inc., as the supervisor of the Material Control Records Group of the Materiel Department, Santa Monica Division. In that capacity, I have in my custody certain of the Company's records relating to standard purchased parts, and I supervise the making of such records as part of the regular and continuous business of the Douglas Aircraft Company, Inc.

On 19 August 1953, I examined the records in my custody, [59] and from that examination I determined that Douglas Aircraft Company, Inc., Santa Monica Division, had ordered and purchased a total of 230 linear motion potentiometers from Edcliff Instruments on the following purchase orders issued under the following United States Government contracts:

## United States

Government	Purchase	Shop Order	Quantity & Model
Prime Contract No.	Order No.	No.	No. Received
W-33-038-AC-10413	1A-383776	5580	2 No. 2409235 Edcliff (D-1) (proto)
DA-30-069-ORD-36	1A-393218-1	3080	132 No. 8002925 (Edcliff D-1)
W-30-069-ORD-3182	1A-142874-F	6019-27	75 No. 8002105 (Edcliff G-1)

United States

Government Prime Contract No.	Purchase Order No.	Shop Order No.	Quantity & Model No. Received
W-30-069-ORD-3182	2A-621618	6019-8	4 No. 554563 (Edcliff F-1)
W-30-069-ORD-3182	2A-149905-F	6019-8	3 No. 554563 (Edcliff F-1)
DA-30-069-ORD-36	2A-701082	3080	5 No. 8002925 (Edcliff D-1)
W-30-069-ORD-3182	2A-713645	6019-8	1 No. 554563 (Edcliff D-1)
W-30-ORD-069-3182	3A-197033-F	6019-8	4 No. 554563 (Edcliff D-1)
W-30-069-ORD-3182	3A-208203-K	6019-8	4 F-4 Dual Linear

The records in my custody show further that said 230 linear motion potentiometers were delivered to the Manufacturing Department of Douglas Aircraft Company, Inc., Santa Monica Division to be incorporated in devices manufactured for the United States Government.

/s/ RAYMOND E. BOSSARTE

Subscribed and Sworn to before me this 4th day of September, 1953.

[Seal] R. H. VAN ESSELSTYN,  
Notary Public in and for said  
County and State. [60]

[Endorsed]: Filed January 15, 1954.

[Title of District Court and Cause.]

## AFFIDAVIT OF LEONARD COMEGYS

State of California,

County of Los Angeles—ss.

Leonard Comegys, being first duly sworn, deposes and says:

I am employed as Divisional Attorney by Bendix Aviation Corporation, Pacific Division, and in the course of such employment I am familiar with and have access to the terms and conditions of contracts between Bendix Aviation Corporation, Pacific Division, and contractors and sub-contractors for the United States Government.

I have read the affidavit of John C. Werner relating to purchases of Bendix Aviation Corporation, Pacific Division, from Edcliff Instruments of linear motion potentiometers under and pursuant [61] to United States Government Contracts No. DA30-069-ORD-746 and No. DA30-069-ORD-125. As of 18 December, 1953, I determined that each of those contracts contains in Clause 29 of General Provisions authorization and consent provisions as follows:

### I. Contract DA30-069-ORD-746

29. "Authorization and Consent—The Government hereby gives its authorization and consent (without prejudice to its rights of indemnification, if such rights are provided for in this contract) for all use and manufacture, in the performance



of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract) of any patented invention (i) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, or (ii) utilized in the machinery, tools or methods the use of which necessarily results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific written instructions given by the Contracting Officer directing the manner of performance."

## II. Contract DA-30-069-ORD-125

29. "Authorization and Consent—The Government hereby gives its authorization and consent (without prejudice to its rights of indemnification, if such rights are provided for in this contract) for all use and manufacture, in the performance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract), of any patented invention (i) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, or (ii) utilized in the machinery, tools or methods the use of which necessarily results from compliance by the Contractor [62] or the using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific

written instructions given by the Contracting Officer directing the manner of performance.”

Further affiant saith not.

/s/ LEONARD COMEGYS

Subscribed and Sworn to before me this 22nd day of December, 1953.

[Seal]           /s/ ELENORE E. RICHARDSON  
Notary Public in and for said  
County and State. [63]

[Endorsed]: Filed January 15, 1954.

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[Title of District Court and Cause.]

### AFFIDAVIT OF CLIFFORD DILLON

State of California,  
County of Los Angeles—ss. [64]

Clifford Dillon, being first duly sworn, deposes and says:

That he is one of the defendants in the above entitled action; that he is now the President and Treasurer of defendant Edcliff Instruments, a corporation, and that he was formerly a partner in Edcliff Instruments, a co-partnership, the predecessor company to Edcliff Instruments, a corporation; that he has never, acting as an individual for his own behalf and separate and apart from his

position as a partner in Edcliff Instruments, a co-partnership, or as an officer and director of defendant Edcliff Instruments, a corporation, manufactured or sold any potentiometers to a purchaser for his own account.

Further affiant saith not.

/s/ CLIFFORD DILLON

Subscribed and Sworn to before me this 15th day of January, 1954.

[Seal]        /s/ PEARL C. GANZELL

Notary Public in and for said  
County and State. [65]

[Endorsed]: Filed January 15, 1954.

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[Title of District Court and Cause.]

## AFFIDAVIT OF CLIFFORD DILLON

State of California,  
County of Los Angeles—ss.

Clifford Dillon, being first duly sworn, deposes and says:

1. He was formerly the Secretary, and is now the President and Treasurer of Edcliff Instruments, a corporation, one of the defendants named in the above entitled action; that in the usual and customary discharge of his duties as such officer of the defendant company he has in his possession and

under his control the files of said company and the files of its predecessor company, Edcliff Instruments, a co-partnership, relating to the manufacture and sale of potentiometers by said companies, and each of them; that, among other things, said files consist of all purchase orders for potentiometers received by the defendant Edcliff Instruments or by its predecessor, Edcliff Instruments, a co-partnership, and all shipping receipts and invoices issued by defendant Edcliff Instruments or by its predecessor, Edcliff Instruments, a co-partnership, for potentiometers manufactured and sold by said companies or either of them;

2. As a part of his said duties and in the usual and customary course of business he has become and now is familiar with the contents of said files and with the circumstances relating to each sale of potentiometers by the defendant Edcliff Instruments or by its predecessor, Edcliff Instruments, a co-partnership;

3. Said files show that the defendant Edcliff Instruments and its predecessor, Edcliff Instruments, a co-partnership, have sold, as of January 1, 1954, a total number of 4,989 potentiometers; 71 of said potentiometers were manufactured for the United States Government, were delivered directly to the United States Government, and were paid for by the United States Government and attached hereto and designated "Exhibit A" is a list of said potentiometers; 4,904 of said potentiometers were manufactured for the United States Government and

with the authorization and consent of the United States Government and were sold and delivered to contractors or subcontractors for the United [67] States Government pursuant to the provisions of a United States Government contract or contracts and, attached hereto and designated Exhibit "B", is a list of said potentiometers; 14 of said potentiometers were manufactured by defendant Edcliff Instruments for, and sold to, civilian purchasers for civilian use and attached hereto and designed Exhibit "C" is a list of said potentiometers;

4. All potentiometers sold by Edcliff Instruments, a co-partnership, and, except for the sales of potentiometers set forth in Exhibit "C" attached hereto, all potentiometers sold by defendant Edcliff Instruments have been sold and delivered either to the United States Government or to contractors or subcontractors for the United States Government pursuant to the provisions of a United States Government contract or contracts.

Further your affiant saith not.

/s/ CLIFFORD DILLON

Subscribed and sworn to before me this 15th day of January, 1954.

[Seal]        /s/ PEARL C. GANZELL,  
Notary Public in and for the County of Los Angeles,  
State of California. [68]



## EXHIBIT A

Schedule compiled from the records and files of Defendant Edcliff Instruments showing potentiometers sold by Defendants to the United Government.

Gov. Agency Purchasing Agency "A"	Potentiometer Model Purchased	Quantity Purchased
	Model A	1
	Model B	1
	Model D	1
	Model F	1
Agency "B"	Model C	2
	Model D	1
Agency "C"	Model A	6
	Model C	8
	Model F	4
Agency "D"	Model C	1
	Model F	4
Agency "E"	Model E	6
	Model F	6
Agency "F"	Model C	2
Agency "G"	Model C	10
Agency "H"	Model C	14
Agency "I"	Model C	3
Total.....		71

## EXHIBIT B

Schedule compiled from the records and files of Defendant Edcliff Instruments showing potentiometers sold by Defendant Edcliff Instruments to purchasers who were contractors or subcontractors for the United States Government.

Company	Potentiometer Model Purchased	Number Purchased
I. ....	Model D	138
	Model E	6
	Model F	18
	Model G	75
	Prototype	7
	Total.....	244
II. ....	Model D	4,100
	Model F	348
	Prototype	6
	Total.....	4,454
III. ....	Model F	1
	Total.....	1
IV. ....	Model B	4
	Model F	2
	Model C	6
	Total.....	12
V. ....	Model D	2
	Model M	3
	Total.....	5
VI. ....	Model H	2
	Total.....	2
VII. ....	Model A	2
	Total.....	2

## Exhibit B—(Continued)

Company	Potentiometer Model Purchased	Number Purchased
VIII. ....	Model B	18
	Total.....	18
IX. ....	Model C	12
	Total.....	12
X. ....	Model A	3
	Model B	32
	Prototype	8
	Total.....	43
XI. ....	Model C	2
	Total.....	2
XII. ....	Model F	1
	Total.....	1
XIII. ....	Model L	98
	Total.....	98
XIV. ....	Model F	1
	Total.....	1
XV. ....	Model A	2
	Model E	1
	Total.....	3
XVI. ....	Prototype	5
	Total.....	5
XVII. ....	Model A	1
	Total.....	1
	Grand Total....	4,904

EXHIBIT C

Schedule compiled from the records and files of Defendant Edcliff Instruments showing potentiometers sold by Defendant Edcliff Instruments to civilian purchasers for civilian use.

Purchaser	Potentiometer Model Pur.	Date Pur.	Quan. Pur.
Mellon Institute of	Model A	9/16/52	1
Ind. Research	Model F	9/16/52	1
Minnesota Mining	Model A	1/ 9/53	1
& Manuf. Co.		4/30/53	1
		8/19/53	1
Rehrig Manuf. Co.	Model A	9/ 9/52	2
Goodwin & McCall	Model D	11/19/53	1
Company	Model A	11/19/53	1
Hydro-Aire, Inc.	Model D	4/ 8/53	1
Paxton Engineer-	Model F	4/ 2/53	1
ing Co.		4/20/53	1
AiResearch	Model A	6/ 9/53	1
Manuf. Co.	Model B	7/30/53	1
Total.....			14

[Endorsed: Filed Jan. 15, 1954.]

[Title of District Court and Cause.]

AFFIDAVIT OF CLYDE V. GRANT, JR.

State of California,  
County of Los Angeles—ss.

Clyde V. Grant, Jr., being duly sworn, deposes and says:

I am employed by Douglas Aircraft Company, Inc., as General Supervisor, Cost Accounting, Santa

Monica Division. In that capacity, I have in my custody the Santa Monica Division's records relating to costs, and to reimbursement under Government contracts, and I supervise the making of such records as part of the regular and continuous business of the company.

On 7 August 1953, I examined the records in my custody and [73] from that examination I determined that Douglas Aircraft Company, Inc. has been reimbursed for purchases of 236 linear motion potentiometers from Edcliff Instruments in accordance with the following schedule:

Douglas Purchase		Reimbursed under U.S. Govt.
Order No.	Reimbursed by	Prime Contract No.
OM-1A-66841	Bell Tel. Lab.	W-30-069-ORD-3182 <sup>1</sup>
1A-383776	U. S. Government	W-33-038-ac-10413
1A-393218-1	Bell Tel. Lab.	DA-30-069-ORD-36 <sup>2</sup>
1A-142874-F	Bell Tel. Lab.	W-30-069-ORD-3182
2A-621618	Bell Tel. Lab.	W-30-069-ORD-3182
2A-149905-F	Bell. Tel. Lab.	W-30-069-ORD-3182
2A-701082	Bell Tel. Lab.	DA-30-069-ORD-36
2A-713645	Bell. Tel. Lab.	W-30-069-ORD-3182
3A-197033-F	Bell. Tel. Lab.	W-30-069-ORD-3182
3A-208203-K	Bell. Tel. Lab.	W-30-069-ORD-3182

Douglas Aircraft Company, Inc. has not yet been reimbursed for two (2) Model F-4 dual linear motion potentiometers purchased from Edcliff Instruments by Douglas purchase order 3A-258059-F under United States Government prime contract number

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<sup>1</sup> Bell Telephone Laboratories is a prime contractor for the United States Government under contract W-30-069-ORD-3182.

<sup>2</sup> Western Electric Company, Inc., is a prime contractor for the United States Government under contract DA-30-069-ORD-36.



W-30-069-ORD-3182. The voucher for payment for said Model F-4 potentiometers was submitted to the Bell Telephone Laboratories on July 31, 1953, and will be paid in the regular course of business.

/s/ CLYDE V. GRANT, JR.

Subscribed and sworn to before me this 4th day of September, 1953.

[Seal]        /s/ GWENDOLYN M. LAUER [74]  
Notary Public in and for said County and State.

[Endorsed]: Filed Jan. 15, 1954.

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[Title of District Court and Cause.]

AFFIDAVIT OF MARION J. KRUZIC

State of California,  
County of Los Angeles—ss.

Marion J. Kruzic, being duly sworn, deposes and says:

I am employed by Douglas Aircraft Company, Inc., as General Supervisor, Outside Manufacturing Followup, Santa Monica Division. In that capacity, I have in my custody certain of the company's records relating to equipment purchases.

On 28 August 1953, I examined the records in my possession, and from that examination, I determined that the Douglas Aircraft Company, Inc., Santa Monica Division, purchased six (6) [75] Model E-1

Dual Linear Motion Potentiometers from Edcliff Instruments on or about 30 April 1951. The instruments were purchased on Douglas purchase order OM-1A-66841, which order was issued under United States Government prime contract W-30-069-ORD-3182.

The records in my custody show further that the above noted potentiometers were assigned to Douglas shop order number 6019-8, and were delivered to the Manufacturing Department of Douglas Aircraft Co., Inc., Santa Monica Division, to be incorporated in devices manufactured for the United States Government.

/s/ MARION J. KRUZIC

Subscribed and sworn to before me this 4th day of September, 1953.

[Seal]            /s/ R. H. VAN ESSELSTYN      [76]  
Notary Public in and for said County and State.

[Endorsed]: Filed Jan. 15, 1954.

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[Title of District Court and Cause.]

AFFIDAVIT OF FREDERICK  
E. MacARTHUR, JR.

State of California,  
County of Los Angeles—ss. [77]

Frederick E. MacArthur, Jr., being first duly sworn, deposes and says: I am employed as an attorney in the Legal Division of Douglas Aircraft

Company, Inc., and in the course of such employment I am familiar with, and have access to, the terms and conditions of contracts between the Douglas Aircraft Company, Inc., and United States Government.

I have read the affidavit of Ed Deardorff relating to purchases by Bendix Aviation Corporation, Pacific Division, from Edcliff Instruments of linear motion potentiometers under and pursuant to United States Government Contract Nos. NOa(s) 51-252 and NOa(s) 51-1061. As of 23 December 1953, I determined that each of those contracts contains authorization and consent provisions as follows:

#### I. Contract NOa(s) 51-252

“Authorization and consent — The Government hereby gives its authorization and consent (without prejudice to its rights of indemnification, if such rights are provided for in this contract) for all use and manufacture, in the performance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract), of any patented invention (i) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, or (ii) utilized in the machinery, tools or methods the use of which necessarily results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific written instructions

given by the Contracting Officer directing the manner of performance.”

## II. Contract NOa(s) 51-1061

“Authorization and consent — The Government hereby gives its authorization and consent (without prejudice to its rights [78] of indemnification, if such rights are provided for in this contract) for all use and manufacture, in the performance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract), of any patented invention (i) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, or (ii) utilized in the machinery, tools or methods the use of which necessarily results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific written instructions given by the Contracting Officer directing the manner of performance.”

Further affiant saith not.

/s/ FREDERICK E. MacARTHUR, JR.

Subscribed and sworn to before me this 6th day of January, 1954.

[Seal] /s/ GWENDOLYN M. LAUER [79]  
Notary Public in and for said County and State.

[Endorsed]: Filed Jan. 15, 1954.

[Title of District Court and Cause.]

AFFIDAVIT OF FREDERICK  
E. MacARTHUR, JR.

State of California,  
County of Los Angeles—ss.

Frederick E. MacArthur, Jr. being first duly sworn, deposes and says: I am employed as an attorney in the Patent Department of Douglas Aircraft Company, Inc., and in the course of such employment I am familiar with, and have access to, the terms and conditions of contracts between the Douglas Aircraft Company, Inc., and United States Government.

I have read the affidavits of Clyde V. Grant, Jr., Marion J. Kruzic, and Raymond E. Bossarte relating to purchases [80] of Douglas Aircraft Company, Inc., from Edcliff Instruments of 236 linear motion potentiometers under and pursuant to United States Government contracts number W-30-069-ORD-3182, DA-30-069-ORD-36 and W-33-038-ac-10413. As of 31 August 1953, I determined that each of those contracts contains authorization and consent provisions as follows:

I. Contract W-30-069-ORD-3182

“Article XLIII. Authorization and Consent—The Government hereby gives its authorization and consent (without prejudice to its rights of indemnification, if such rights are provided for in this contract) for all use and manufacture, in the perform-



ance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract), of any patented invention (i) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, or (ii) utilized in the machinery, tools or methods the use of which results from compliance by the Contractor or the using sub-contractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific written instructions given by the Contracting Officer directing the manner of performance.”

## II. Contract DA-30-069-ORD-36

“Article 30. Authorization and Consent—The authorization and consent by the Government is hereby given (without prejudice to its right of indemnification, if such rights are provided for in the purchase order) for all use and manufacture in the performance of this purchase order or any part hereof or any amendment hereto or any subcontract hereunder of any patented invention (i) embodied in the structure or composition of any Article the delivery of which is accepted by the Government under this purchase order, or [81] (ii) utilized in the machinery, tools or methods the use of which results from compliance by you or any using sub-contractor with (a) specifications or written provisions now or hereafter forming a part of this purchase order or (b) specific written instructions

given by the Contracting Officer directing the manner of performance.”

### III. Contract W-33-038-ac-10413

“(a) For the purpose set forth in Section 6 of the Royalty Adjustment Act of 1942 (Public No. 768, 77th Cong., 35 USC 94), insofar as said Section 6 refers to the Act of June 25, 1910, as amended (35 USC 68), and for no other purpose whatsoever, the Government shall, without prejudice to its rights of indemnification, if any, be deemed to have given its authorization and consent to the use and manufacture, in the performance of this contract or of any subcontract hereunder, (1) of any patented invention embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, and (2) of any patented invention utilized in machinery, tools or methods the use of which (i) is not known to the Contractor or the using subcontractor to be within the prima facie scope of any unexpired adversely-held domestic patent or (ii) necessarily results from compliance by the Contractor or such subcontractor with specifications or written provisions now or hereafter forming a part of this contract or with specific written instructions given by the Contracting Officer for the purpose of this paragraph.”

On 11 May 1953, Mr. J. E. Coates, Patent Counsel for Douglas Aircraft Company, Inc. addressed a letter to the Chief of Ordnance, U.S. Army, requesting authorization to purchase linear motion poten-

tiometers from Edcliff Instruments. A letter in reply dated 8 June 1953 and signed by W. E. Thibodeau, Chief [82] Patent Attorney for the Army Bureau of Ordnance was received by Douglas Aircraft Company, Inc., and is attached hereto and designated Exhibit A.

Further affiant sayeth not.

/s/ FREDERICK E. MacARTHUR, JR.

Subscribed and sworn to before me this 4th day of September, 1953.

[Seal] /s/ CLARA J. KESLER,

Notary Public in and for said

County and State. [83]

### EXHIBIT A

ABGomory/ecn/52748

ORDGL-PT

8 June 1953

Douglas Aircraft Co., Inc., Santa Monica, Calif.

Attn: Mr. J. E. Coates, Patent Counsel.

Gentlemen:

This is in reply to your letter G-AN-L-33, dated May 11, 1953, on the subject of Contracts Nos.:

W-30-069-Ord-3182

DA-30-069-Ord-36

DA-30-069-Ord-125

DA-30-069-Ord-746

The first two contracts (Research and Development) contain Authorization and Consent Clauses,

without the qualification "necessarily", giving authorization and consent" \* \* \* for all use in the performance of (the) contract or any part (thereof) or any amendment (thereto) or any subcontract (thereunder) \* \* \* of any patented invention \* \* \* (ii) utilized in \* \* \* methods the use of which results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions \* \* \*".

The last two contracts (Supply) contain Research and Development articles which provide that research and development or design incident to or arising from the performance of these contracts shall be governed by the provisions of the basic contract W-30-069-Ord-3182. Therefore, these contracts, with respect to experimental activities thereunder, are dependent from the basic contract and its extension (DA-30-069-Ord-36).

For the foregoing reasons, this office is of the opinion that use "for various experimental purposes directly connected with [84] subject contracts such as specification testing, testing of sub-assemblies received from sub-contractors, and other operations of like nature" is authorized under the existing terms of the contracts.

For the reason that your letter G-L-230 dated April 21, 1953 to Western Electric Co. recites "used for various experimental purposes" without the limitation "directly connected with subject contracts", it is emphasized that this opinion is limited to such various experimental purposes as are connected with subject contracts. Any generalized

experimentation must be governed by the general law on the subject.

For the chief of ordnance.

Sincerely yours,

/s/ W. E. THIBODEAU,  
Assistant. [85]

[Endorsed]: Filed Jan. 15, 1954.

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[Title of District Court and Cause.]

### AFFIDAVIT OF EDMUND W. PITZER

State of California,

County of Los Angeles—ss. [86]

Edmund W. Pitzer, being first duly sworn, deposes and says:

That he is one of the defendants in the above entitled action; that he is now the Vice President and Secretary of defendant Edcliff Instruments, a corporation, and that he was formerly a partner in Edcliff Instruments, a co-partnership, the predecessor company to Edcliff Instruments, a corporation; that he has never, acting as an individual for his own behalf and separate and apart from his position as a partner in Edcliff Instruments, a co-partnership, or as an officer and director of defendant Edcliff Instruments, a corporation, manufactured or sold any potentiometers to a purchaser for his own account.

Further affiant saith not.

/s/ EDMUND W. PITZER



Subscribed and sworn to before me this 15th day of January, 1954.

[Seal] /s/ PEARL C. GANZELL,  
Notary Public in and for said  
County and State. [87]

[Endorsed]: Filed Jan. 15, 1954.

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[Title of District Court and Cause.]

### AFFIDAVIT OF JOHN C. WERNER

State of California,  
County of Los Angeles—ss.

John C. Werner, being duly sworn, deposes and says:

I am employed by Bendix Aviation Corporation as the Production Control Supervisor of its Pacific Division Plant No. 1 at North Hollywood, California. In that capacity I have in my custody certain records of that plant and I supervise the making of such records as part of the regular and continuous business of Bendix Aviation Corporation, Pacific Division.

On October 14, 1953, I examined the records in my custody and from that examination I determined that Plant No. 1 of Bendix [88] Aviation Corporation, Pacific Division, had purchased 4,100 linear motion potentiometers from Edcliff Instruments on the following purchase orders issued under the following United States Government contracts:

United States Government Prime Contract No.  
DA-30-069-ORD-746

Purchase Order No.: A 50340.

Quantity and Model No.

Purchased: 3600 No. 8002925 (Edcliff D-1)

Received to 10/14/53: 977.

United States Government Prime Contract No.  
DA-30-069-ORD-125

Purchase Order No.: A 23977.

Quantity and Model No.

Purchased: 500 No. 8002925 (Edcliff D-1)

Received to 10/14/53: 500.

Said records show further that all of said linear motion potentiometers were purchased for incorporation into devices to be manufactured for the United States Government and that all potentiometers received by Bendix Aviation Corporation, Pacific Division, have been either incorporated into devices so manufactured, and delivered to Douglas Aircraft Company, Inc. for ultimate delivery to the United States Government, or held in stock for incorporation into said devices to be so delivered to Douglas Aircraft Company, Inc.

/s/ JOHN C. WERNER

Subscribed and sworn to before me this 22nd day of December, 1953.

[Seal] /s/ ELENORE E. RICHARDSON,  
Notary Public in and for said  
County and State. [89]

[Endorsed]: Filed Jan. 15, 1954.

[Title of District Court and Cause.]

MEMORANDUM IN OPPOSITION TO MOTION FOR PARTIAL SUMMARY JUDGMENT

\* \* \* \* \*

\* \* \* Obviously, at some time during the proceedings it will be necessary to ascertain which devices of defendants were sold to the Government, its contractors or sub-contractors. Plaintiff takes no issue to the statement of law with respect to this type of device, its relief lies in the Court of claims. Plaintiff, however, contends that the relief sought by the instant motion is premature and essentially pointless. Obviously, those devices which fall within the scope of Section 1498 of Title 28 cannot be made the subject of injunctive relief or damages in this action. \* \* \* [91]

\* \* \* \* \*

\* \* \* Although plaintiff agrees that those devices which were sold to the Government, its contractors and sub-contractors, must be excluded from damages or injunctive relief, it is felt that an effort on the part of defendants to obtain some form of order regarding these devices at this time is premature. [92]

\* \* \* . \* \*

LYON & LYON,  
/s/ By R. DOUGLAS LYON,  
Attorneys for Plaintiff and for Defendants on  
Counterclaims. [93]

[Endorsed]: Filed February 10, 1954.

[Title of District Court and Cause.]

### MINUTES OF THE COURT

Date: Feb. 15, 1954, at Los Angeles, Calif.

Present: Hon. Leon R. Yankwich, District Judge;  
Deputy Clerk: John A. Childress; Reporter: Marie Zellner.

Counsel for Plaintiff: R. Douglas Lyon.

Counsel for Defendants: Glenn Warner.

Proceedings: For hearing motion of defendants, filed Jan. 15, 1954, for partial summary judgment as to certain claims and for an order of direction as to further proceedings.

Filed affidavit of G. Warner in support of motion.

Lodged, by defendants, proposed form of order and summary judgment.

Attorney Warner argues motion.

It Is Ordered that said motion of defendants for summary judgment, etc., is denied without prejudice to raising points at time of trial.

EDMUND L. SMITH,

Clerk

/s/ By JOHN A. CHILDRESS,

Deputy Clerk

[95]

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[Title of District Court and Cause.]

### DEFENDANTS' NOTICE UNDER 35 U.S.C. 282

\* \* \* \* \*

3. Within the present knowledge of defendants, the following United States Letters Patents will be

relied upon in anticipation of United States Letters Patent 2,515,981 in suit and will be relied upon as showing the state of the art. [97]

H. A. Kiep: Patent No. 954,518; issue date: April 12, 1910.

M. W. Newton: Patent No. 1,004,460; issue date: September 26, 1911.

C. W. Mountford: Patent No. 1,539,266; issue date: May 26, 1925.

W. J. Thayer: Patent No. 1,660,979; issue date: February 28, 1928.

B. H. Campbell: Patent No. 2,125,219; issue date: July 26, 1938.

H. W. Rubinstein: Patent No. 2,178,241; issue date: October 31, 1939.

H. W. Rubinstein: Patent No. 2,242,327; issue date: May 20, 1941.

C. O. Nelson: Patent No. 2,273,760; issue date: February 17, 1942.

W. E. Schauer: Patent No. 2,280,305; issue date: April 21, 1942.

H. W. Batcheller: Patent No. 2,306,152; issue date: December 22, 1942.

J. M. Aufiero: Patent No. 2,420,807; issue date: May 20, 1947.

4. Within the present knowledge of defendants, the following listed publications will be relied upon in anticipation of United States Letters Patent 2,515,981 in suit and as showing the state of the art.

(a) Catalogue of the Braun Corporation for the year 1940 at page 936.

(b) "Electrical Measurements, Laws", McGraw-



Hill Book Company, Inc., New York, 1917, pages 151, 152.

(c) "Electronics Dictionary", Cooke and Markus, McGraw-Hill Book Company, Inc., New York, 1945, pages 6,327,352.

Dated: April 23, 1954.

JAMES B. CHRISTIE,  
ROBERT L. PARKER, JR.  
GIBSON, DUNN & CRUTCHER,  
SAMUEL O. PRUITT, JR.  
F. DANIEL FROST III,  
GLENN WARNER,

/s/ By SAMUEL O. PRUITT, JR.,

Attorneys for Defendants and  
Counterclaimants

[98]

[Endorsed]: Filed April 23, 1954.

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[Title of District Court and Cause.]

### OPINION

Appearances: For the Plaintiff: Lyon & Lyon, By Lewis E. Lyon, Esq. and R. Douglas Lyon, Esq., 811 West Seventh Street, Los Angeles 17, California. For the Defendants: Gibson, Dunn & Crutcher, By Samuel O. Pruitt, Jr., & Glenn Warner, Esqs., 634 South Spring Street, Los Angeles 14, California. [100]

Yankwich, Chief Judge:

Action for infringement of patent No. 2515981, issued to M. E. Bournes on July 18, 1950. The de-

fendants have denied infringement and have attacked the validity of the patent. No claim of invention by them is asserted by the defendants. Their challenge of the validity of the patent is based on claimed anticipation.

## I.

### The Validity of the Patent in Suit

The issues, as narrowed by the proff, concern the validity of the single claim of the patent, which reads:

“An adjustable resistor comprising a base having a groove therein, a shaft reciprocably mounted in the said groove, a post mounted transversely to said shaft and slidable back and forth in said groove, a resilient contact place secured to said post, a cover mounted to said base over said groove, an elongate resistance contact plate secured to said post, a cover mounted to said base over said groove, and elongate resistance element and an electrically conductive elongate strip disposed parallel and mounted to the inner face of said cover and engaging the ends of said resilient plate, a pair of terminals passing through and secured in said cover, the inner ends of said terminals being electrically attached to said element ends, and a [101] third terminal passing through and secured to said cover and electrically attached to said elongate strip.”

The invention is denominated an “adjustable resistor”, and is known in industry as a “potentiometer.”

The inventor has illustrated his invention in two

embodiments. (See illustrations) The validity of the claim is challenged. The challenge lacks merit.

A potentiometer is an electro-mechanical device containing a resistance element that is contacted by a movable slider. (See, F. E. Dole, Potentiometers in "Components Handbook," ed. by John F. Blackburn, 1949) The patented device is a linear type.

The problem which confronted the art is stated in the specifications in this manner:

"This invention relates to adjustable resistors, and more particularly to adjustable resistors which must respond precisely and without ambiguity to the means which actuates the movable slider. This is a division of application Serial No. 9,697 filed February 20, 1948."

The problem was met by the inventor by providing (a) an adjustable resistor of simple structure that would respond with precision to an adjustable post or slider, (b) that would achieve contact in the same position at all times, and (c) that could be assembled easily and when assembled, carry out its complete function without disconnecting wires or disconnecting elements necessarily associated with the structure in its completed form. This is invention over the prior art, whether [102] it be considered in the light of the standards established by the 1952 revision and codification of the patent law or by the law as declared in decisions prior to the revision. (35 U.S.C.A., Secs. 101-103; *Pointer vs. Six-Wheel Corp.*, 1949, 9 Cir. 177 F(2) 153, 159-161; *Watson vs. Heil*, 1951, 9 Cir., 192 F(2) 982, 985; *Jeoffroy vs. Graham*, 1953, 5 Cir., 206

F(2) 772, 776-777; Application of O'Keefe, 1953, C.A.P.A., 202 F(2) 767, 771-772; and see, Kwikset Locks vs. Hillgren, 1954, 9 Cir., 210 F(2) 483, 485-486) The result achieved is admittedly superior, and, as one of the defendants' own experts testified, the patented device is easier and more economical to construct. The defendants have pressed upon us a group of patents which they claim anticipate the patent in suit. Two of these, 2,252,327 (Rubinstein) and 2,306,152 (Batcheller), were the references considered by the patent office. The patents referred to by the defendants are, in the order of issuance:

No. 954,518, Keip, April 12, 1910.

1,004,460, Newton, Sept. 26, 1911.

1,539,266, Mountford, Dec. 29, 1922.

2,125,219, Campbell, July 26, 1938.

2,178,241, Rubinstein, Oct. 31, 1939.

2,242,327, Rubinstein, May 20, 1941.

2,273,760, Nelson, Feb. 17, 1942.

2,280,305, Schauer, April 21, 1942.

2,306,152, Batcheller, Dec. 22, 1942.

2,420,807, Aufiero, May 20, 1947. [103]

Of these, only the two Rubinstein patents and the Mountford patent relate to the subject matter of the patent in suit,—that is, “variable resistance”. The others relate to a variety of electronic devices ranging from therapeutic lamps (Newton) to volume control of hearing aids (Schauer).

The essential elements of the present invention, as claimed, are not found in this prior art, either in the same or in other combinations. The defend-



ants seem to find the greatest similarity to the patent in suit in Rubinstein patent No. 2,242,327. But even as to it, it is not asserted that the single claim in the present patent is anticipated by the claims or specifications of the Rubinstein patent. All that is claimed is that one of the illustrations of the device in the Rubinstein patent is similar to one of the embodiments of the patent in suit. Drawings may anticipate a patent, if they teach what the patentee claims as his invention. See, *Des Rosiers vs. Ford Motor Co.*, 1944, 1 Cir., 143 F(2) 907, 911-912). However, unless the drawings specifically limit the scope of an invention, they are merely illustrative. (See, *Permutit vs. Graver Corp.*, 1931, 284 U.S. 52, 60) The specifications may limit the claims. (*Schnitzer vs. California Corrugated Culvert Company*, 1944, 9 Cir., 140 F(2) 275, 276; *Kemart vs. Printing Arts Research Laboratories, Inc.*, 1953, 9 Cir., 201 F(2) 624, 629) However, because "the claim is the measure of the grant",—*Universal Oil Co. vs. Globe Oil & Refining Co.*, 1949, 322 U.S. 471, 484,—the inventor is entitled to the full scope of his claim, regardless of the manner in which he may have sought to illustrate the embodiment in a drawing [104]

Indeed, Rubinstein says specifically:

"While I have shown and described two constructions in which the invention may be advantageously embodied, it is to be understood that the constructions shown have been selected merely for the purpose of illustration or example and that various changes in the size, shape and arrangement



of the parts may be made without departing from the spirit of the invention or the scope of the sub-joined claims.”

The patent in suit states:

“Two embodiments of the invention described generally above have been illustrated in the drawings, \* \* \*”

The inventor has not limited himself to them, nor has he excluded others.

To be anticipatory, a patent or a publication must,—to use the language of Judge Learned Hand: “bear within its four corners adequate directions for the practice of the patent invalidated. If the earlier disclosure offers no more than a starting point for further experiments, if its teaching will sometimes succeed and sometimes fail, if it does not inform the art without more how to practice the new invention, it has not correspondingly enriched the store of common knowledge, and it is not an anticipation.” (*Dewey & Almy Chemical Co. vs. Mimex Co.*, 1942, 2 Cir., 124 F(2) 986, 989)

(And see, *Lincoln Stores, Inc. vs. Nashua Mfg. Co.*, 1946, 2 Cir., 157 F(2) 154, 160) [105]

If the prior patent does not solve the problem which the subsequent patent solved ultimately, there is no anticipation. (See, *Williams Iron Works Co. vs. Hughes Tool Co.*, 1940, 10 Cir., 109 F(2) 500, 510; *Lincoln Stores, Inc. vs. Nashua Mfg. Co.*, *supra*, p. 160) And that is exactly the situation here.

It follows that the patent is valid and infringed by the defendants’ devices enumerated in the separate Order to be filed with this Opinion.

## II.

## The Claim of Unfair Competition

The plaintiff has not shown any legal grounds for relief for unfair competition. The defendants' instruments are all marked plainly with the name of their company. There has been no confusion of source. The single questionable incident was explained satisfactorily. (See, Restatement, Torts, Sec. 728, Comment (a); and see, the writer's opinion in *Palmer vs. Gulf Publishing Co.*, 1948, D.C. Cal., 79 F. Supp. 731, 737, 738) The claim that the defendant Edmund W. Pitzer, while in the employ of the plaintiff, learned the names of his customers and the sources of supply for his materials, and that he later appropriated these "trade secrets" is not supported by the record. The use of potentiometers being limited almost entirely to airplane manufacturers working in the field of guided missiles and constructing chiefly for the United States Government, it follows that anyone entering the field would, of necessity, approach and solicit these suppliers. The use of certain precious metals in the making of the patented device was known to the industry and disclosed by information supplied by the Research Departments of certain Government Agencies to persons interested in the field. So, [106] granting that a case of unfair competition may arise from disclosure of secret practices (See, *Dupont Powder Co. vs. Masland*, 1917, 244 U.S. 100; *Riess vs. Sanford*, 1941, 47 Cal. App(2) 244, 246-247; *Smith vs. Dravo Corp.*, 1953, 7 Cir., 203 F(2) 369, 376-377), the facts here do not support such

a claim. (See, Restatement, Torts, Sec. 757, Comment (b); Mycalex Corp. of America vs. Pemco Corp., 1947, 4 Cir., 159 F(2) 907, 912-913; Pagliero vs. Wallace China Co., 1952, 9 Cir., 198 F(2) 339, 343-344; Continental Car-Na-Var Corp. vs. Moseley, 1944, 24 C(2) 104, 110; Aetna Building Maintenance Co. vs. West, 1952, 39 C(2) 198, 204-206)

In sum, the defendants deliberately set out to appropriate the plaintiff's patent in a field in which they had very little, if any, knowledge or experience. No previous inventive faculty is claimed by any of the persons composing the defendants corporation. However, such information as the defendants acquired through Pitzer about customers and materials were matters of general knowledge in the industry and cannot be turned into "trade secrets", either by the fiat of the plaintiff or by any clauses in the contract of employment with Pitzer. (See, Avocado Sales Co., vs. Wyse, 1932, 122 Cal. App. 627, 634-636; De Luxe Box Lunch & Catering Co. vs. Black, 1948, 86 Cal. App.(2) 434, 438-439)

Judgment for the plaintiff. The specific terms to be set forth in a separate Order filed with this Opinion.

Dated this 15th day of July, 1954.

/s/ LEON R. YANKWICH,  
Judge. [107]

[Endorsed]: Filed July 15, 1954.

[Title of District Court and Cause.]

### DECISION

The above entitled cause heretofore tried, argued and submitted, is now decided as follows:

Upon the grounds set forth in the Opinion filed herewith, Judgment and Decree will be for the plaintiff on the first cause of action as follows:

(a) The patent in suit is valid and the defendants have infringed the single claim of the patent. The Court designates the following structures of the defendants as infringing:

Exhibit I (Plate 6 of Plaintiff's Exhibit).

Plate 9 (of the same Exhibit).

Defendants' Exhibit U (Plate 11).

Defendants' Exhibit T (Plate 14).

Plaintiff's Exhibit 30 (Plate 17).

Defendants' Exhibit E(1).

Plate 20. [108]

Injunction will issue enjoining future infringement. Accounting for profits and/or damages is ordered, Reference to a Master to be made for such purposes, after the Judgment shall have become final.

(b) Plaintiff to take nothing by the second cause of action for unfair competition.

(c) Costs to the plaintiff.



Findings and Interlocutory Decree to be prepared by counsel for the plaintiff under Local Rule 7.

Dated this 15th day of July, 1954.

/s/ LEON R. YANKWICH,  
Judge. [109]

[Endorsed]: Filed July 15, 1954.

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[Title of District Court and Cause.]

OBJECTIONS OF DEFENDANTS TO PLAINTIFF'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND JUDGMENT [110]

Defendants respectfully submit that the proposed Findings of Fact, Conclusions of Law, and Judgment, heretofore lodged with the above-entitled Court by plaintiff, are deficient and do not include matters which are material to the issues presented to and determined by this Court. Defendants are therefore lodging concurrently herewith their own proposed Findings of Fact, Conclusions of Law, and Judgment, which we believe cures the deficiencies in the documents heretofore proposed by plaintiff and which carry out the decision of this Court as set forth in its memorandum opinion. This memorandum will point out the deficiencies in the documents proposed by plaintiff, and will explain the additional material found in the revised proposals of defendants. It should be pointed out that defendants were the prevailing parties as to



Count II of the Amended Complaint, and we believe the proposals submitted herewith are vital to support the Court's judgment as to that Count.

The proposed Findings of Fact, Conclusions of Law, and Judgment heretofore lodged by plaintiff with the above-entitled Court, are deficient and erroneous in the following respects:

### I. Findings of Fact:

A. Findings of Fact as proposed by plaintiff do not include any Findings which state that the Model B-11 and Model B-12 potentiometers manufactured by defendants do not infringe U. S. patent No. 2,515,981. The fact of non-infringement by each of said potentiometers is material to issues presented by the Amended Complaint and by Counterclaim IV, and each of said potentiometers was placed in evidence at the trial herein by plaintiff. Plaintiff did not, however, claim infringement by said potentiometers and the decision of this Court did not include said potentiometers among those which it held infringed plaintiff's patent. Since those instruments were in issue at the trial, they should be covered by the [111] Findings and Judgment.

B. Said Findings of Fact as proposed by plaintiff do not dispose of issues presented by Count II of the Amended Complaint for unfair competition and decided by this Court relating to (1) the alleged appropriation by defendants of plaintiff's trade secrets; (2) the alleged appropriation by defendants of plaintiff's customers; (3) the asserted

breach by defendants of that employment contract between defendant, Edmund W. Pitzer, and plaintiff; (4) the claimed consumer confusion relating to the source of potentiometers manufactured by plaintiff and by defendants; (5) the claimed attempts by defendants to pass off potentiometers manufactured by them as plaintiff's; and (6) the claimed secondary meaning of the potentiometers manufactured by plaintiff.

Defendants proposed Findings of Fact incorporate in toto those proposed by plaintiff, and, beginning with Paragraph XXI of defendants' proposed Findings of Fact, add Findings which we submit are essential to correct the above-noted deficiencies in order to comply with and effectively support the decision of this Court.

## II. Conclusions of Law.

A. Plaintiff's proposed Conclusions of Law are deficient in the same respects and are subject to the same Objections as his proposed Findings of Fact.

B. In addition, plaintiff's proposed Conclusions of Law do not state with particularity or certainty the scope or extent of the injunction to be entered herein against the defendants.

C. Plaintiff's proposed Conclusions of Law erroneously fail to exempt from the injunction to be entered herein the sale by defendants of potentiometers to the United States Government or to contractors or sub-contractors of the United [112] States Government, as required by Section 1498

of Title 28 of the U. S. Code. More than 97% of all linear motion potentiometers sold by defendants have been sold to the United States Government and to Douglas Aircraft Company, Bendix Aviation Corporation and Convair as contractors for the United States Government. (Defendants' Exhibit Y.) Affidavits which have been executed by counsel for those companies are being filed with this Court to show that those companies have been and now are authorized by the United States Government to purchase potentiometers from defendants. Any sale of potentiometers to those companies, to other contractors of the United States Government or to the United States Government itself, should therefore be exempted from the injunction to be entered herein, as specifically provided in Section 1498 of Title 28 of the U. S. Code.

Defendants have incorporated Paragraphs 1 through 4 of plaintiff's proposed Conclusions of Law in Paragraphs 6 through 9 of the Conclusions of Law proposed by defendants. Paragraphs 1 through 5 of defendants' proposed Conclusions of Law have been added and are designed to remedy the above noted deficiencies.

### III. Judgment.

The proposed Judgment lodged concurrently herewith by defendants incorporates the language of that Judgment proposed by plaintiff, with the following modifications:

A. Paragraph IV has been added and recites that the Model B-11 potentiometer and the Model

B-12 potentiometer manufactured by defendants do not infringe Letters Patent No. 2,515,981;

B. Paragraph 12 in plaintiff's proposed Judgment (Paragraph 13 in defendants' proposed Judgment) has been modified [113] so that the injunction therein shall comply with Section 1498 of Title 28 of the U. S. Code;

C. Paragraph 13 of plaintiff's proposed Judgment (Paragraph 14 of defendants' proposed Judgment) has been modified to provide that plaintiff may not recover damages for the sale of potentiometers by defendants to the United States Government or its contractors, as required by Section 1498 of Title 28 of the United States Code.

Defendants therefore respectfully object to the proposed Findings of Fact, Conclusions of Law, and Judgment, heretofore lodged with this Court by plaintiff, and submit herewith in lieu thereof, for consideration by this Court, their proposed Findings of Fact, Conclusions of Law, and Judgment.

Dated: September 3, 1954.

GIBSON, DUNN & CRUTCHER  
SAMUEL O. PRUITT, JR.

By SAMUEL O. PRUITT, JR.

Attorneys for Defendants and Counterclaimants,  
Edeliff Instruments, Edmund W. Pitzer and  
Clifford Dillon. [114]

[In ink: Considered Overruled. L. R. Y.]

[Endorsed]: Lodged September 3, 1954.

[Endorsed]: Filed September 8, 1954.



[Title of District Court and Cause.]

## AFFIDAVIT OF J. E. COATES

State of California,

County of Los Angeles—ss.

J. E. Coates, being first duly sworn deposes and says:

He is Chief Patent Counsel for Douglas Aircraft Company, Inc., Santa Monica, California, and that in the normal and ordinary course of his duties he has become familiar with and knows the contents of the records and files of that company relating to the purchase by Douglas Aircraft Company, Inc. of potentiometers from [115] Edcliff Instruments; said files reveal that all potentiometers purchased by Douglas Aircraft Company, Inc. from Edcliff Instruments have been purchased with the authorization and consent of the United States Government and under and pursuant to United States Government contracts, and have been paid for by the United States Government; said files further reveal that all of said potentiometers have either been incorporated by Douglas Aircraft Company, Inc. into devices which have been delivered to the United States Government, or have been used by Douglas Aircraft Company, Inc. for research and development purposes directly in connection with United States Government classified projects.

Attached hereto and designated Exhibit "A" are true and accurate copies of correspondence between Douglas Aircraft Company, Inc., and various agen-



cies of the United States Government, in which the United States Government authorized and consented to the purchase of said potentiometers from Edcliff Instruments by Douglas Aircraft Company, Inc.

/s/ J. E. COATES

Subscribed and sworn to before me this 30th day of August, 1954.

[Seal] /s/ CLARA J. KESLER,

Notary Public in and for said  
County and State. [116]

EXHIBIT A  
(Copy)

Airmail                  December 15, 1952                  G-AN-L-13

To: Contracting Officer, Department of the Navy,  
Bureau of Aeronautics, Washington 25, D. C.

Subject: Contracts NOa(s) 51-252 and 51-1061  
Notice of Alleged Infringement.

1. Contractor has been notified by counsel for the Bourns Laboratories of Riverside, California, that the linear motion potentiometers (ORD P/N 8002925) which we are now purchasing from the Edcliff Instrument Company of Pasadena, California, for use under subject contracts, are a direct infringement of Bourn's patent No. 2,515,981. The Bendix Aviation Corporation, Pacific Division, North Hollywood, California, subcontractors under subject contracts, has received a similar notice. A copy of each notice is enclosed.

2. Bourns Laboratories has filed an action in the

## Exhibit A—(Continued)

United States District Court, Southern District of California, Central Division, against the Edcliff Instrument Company, the cause being entitled Marlan E. Bourns, dba Bourns Laboratories, Plaintiff, vs. Edcliff Instrument Company, et al., Defendants. Civil Action No. 14764.

The action was filed 21 November 1952.

3. For the present Contractor has discontinued the purchase of the alleged infringing devices. It is preferable, however, to have more than one supplier for the potentiometers available, in the interest of both reasonable prices and timely deliveries. It is, therefore, respectfully requested that the Contracting Officer specifically authorize Contractor and its sub-contractors to procure and use the alleged infringing potentiometers in the performance of the work under subject contracts. [118]

4. The Edcliff Instrument Company has informed the Contractor that it believes that the Bourns patent is invalid and that the Edcliff device does not infringe thereon. Furthermore, Contractor has been informed that the Edcliff Company is willing to indemnify Contractor, and those claiming under him, against liability for infringement.

Yours very truly,

Douglas Aircraft Company, Inc.

J. E. Coates, Patent Counsel

FEM:wy—cc: E. Curtis, J. A. Dundas, Washington Office, W. C. Cleveland, F. Daniel Frost III, Gibson, Dunn & Crutcher, 634 South Spring Street, Los Angeles. [119]

Exhibit A—(Continued)

Air Mail                      February 27, 1953                      G-AN-L-25

(Copy)

To: Contracting Officer, Department of the Navy,  
Bureau of Aeronautics, Washington 25, D. C.

Subject: Contracts NOa(s) 51-252 and 51-1061.  
Notice of Alleged Infringement.

Reference: Douglas Aircraft Company Letter  
G-AN-L-13, 15 December 1952.

1. It would be appreciated if the action requested in our letter of 15 December 1952, G-AN-L-13, regarding the Bourns-Edcliff infringement matter could be expedited.

2. We are about to write additional bids on the linear potentiometers, and, as we previously indicated, we would prefer to have more than one source. Our procurement activities are necessarily restricted until we receive the answer requested.

Douglas Aircraft Company, Inc.

J. E. Coates, Patent Counsel

FEM:wy—cc: F. Daniel Frost, Gibson, Dunn &  
Crutcher, 634 S. Spring St., Los Angeles, Calif.  
E. Curtis, J. Dundas, W. C. Cleveland, Wash-  
ington Office. [120]

## Exhibit A—(Continued)

## Naval Speed Letter

(Copy)

Use for Urgent Letters Only—(xx) Regular Mail  
—Do Not Clear Through Communication Office—Classification: Unclassified.

In reply refer to: Aer-PL-1, NOas 51-252, NOas 51-1061 60374. 30 Apr 1953

To: Bureau of Aeronautics Resident Representative, Santa Monica Division, Douglas Aircraft Company, Inc., Santa Monica, California.

Reference: Barr Douglas Aircraft Company, Inc SPDLTR DMK:wg, SER 2237, NOa(s) 51-252; NOa(s) 51-1061, G-AN-L-29, DTD 22 Apr 1953.

Subject: Contracts NOa(s) 51-252 and NOa(s) 51-1061.

Douglas Letters G-AN-L-13 and G-AN-L-25 Do Not Make Clear the Reasons for the Douglas Request Particularly as Contracts NOas 51-252 and NOas 51-1061 Include the ASPR 9-106 (Authorization and Consent) Clause and Do Not Contain the ASPR 9-105 (Patent Indemnity) Clause.

James S. Tassin, Contracting Officer  
Bureau of Aeronautics

DMK:wg, NOa(s) 51-252, NOa(s) 51-1061.

Exhibit A—(Continued)

End. 1. May-5 1953. From: Bureau of Aeronautics  
Resident Representative, Santa Monica, Calif.  
To: Douglas Aircraft Co., Inc., Santa Monica  
Plant. For: Action Indicated. Attn: J. E.  
Coates G-17. (x) Information. (Stamped) D.  
M. Kelly wg By Direction.

Patent Department Received May 6-1953 Douglas  
Aircraft Company, Inc.

Copy to Douglas Aircraft Company, Inc., Santa  
Monica, California, Department G-17, J. E.  
Coates.

Address: Contracting Officer, Bureau of Aeronau-  
tics, Department of the Navy, Washington 25,  
D. C. Classification: Unclassified. [121]

Copies to: Dundas, Curtis, F. Daniel Frost, Wash-  
ington Office. (Copy)

Air Mail May 11, 1953 G-AN-L-33

To: Legal Office, Office, Chief of Ordnance, ORD-  
GL-PT, Ordnance Department, Department of  
the Army, Washington 25, D. C.

Attention: W. E. Thibodeau.

Subject: Contract W-30-069-ORD-3182 (Bell Tele-  
phone Laboratories Purchase Order 139701)

Contract DA-30-069-ORD-36 (Bell Telephone  
Laboratories Purchase Order 170919)

Contract DA-30-069-ORD-125 (Western Elec-  
tric Company, Inc., Purchase Order M-50852)

Contract DA-30-069-ORD-746 (Western Elec-  
tric Company, Inc., Purchase Order M-52702)



## Exhibit A—(Continued)

Enclosure: Douglas Letter G-L-230, to Western Electric Co., Inc.

1. At the request of Mr. F. Daniel Frost of the firm of Gibson Dunn and Crutcher, Los Angeles, California, Counsel for the Edcliff Instrument Company, Pasadena, California, Contractor hereafter sets forth the circumstances of the infringement matter between the Edcliff Company and the Bourns Laboratories, Riverside, California.

2. As the Ordnance Department has been previously informed by the Western Electric Company, Contractor and its sub-contractor, Bendix Aviation Corporation, have received formal notices of infringement with regard to Patent No. 2,515,981 owned by Bourns Laboratories, and covering Linear Motion Potentiometers.

3. Prior to receiving the notice of infringement from the Bourns Company, Contractor bought potentiometers, in the performance of work under subject contracts, from both Edcliff and Bourns, and used them in two distinct ways. Some of the instruments were incorporated in articles ultimately delivered to the White Sands Proving Grounds, and others were retained in the Contractor's laboratories and used for various experimental purposes directly connected with subject contracts such as specification testing, testing of sub-assemblies received from sub-contractors, and other operations of [122] like nature. It is to be seen, that with regard to the first group, the usual authorization is sufficient to protect Contractor, because the government actually accepts

## Exhibit A—(Continued)

an article embodying the alleged infringing device. With regard to the second group of instruments, the authorization and consent clause does not operate because the alleged infringing device is never embodied in a structure or article which is delivered to the government, nor is it required in the machinery, tools or methods called for by the applicable specifications.

6. Contractor desires a determination, at the earliest moment, either specifically authorizing Contractor to purchase the Edcliff devices, or specifically informing Contractor to refrain from purchasing the Edcliff devices.

5. Contractor desires to purchase the Edcliff devices in the interest of both lower prices and timely delivery. The "price history" of the instruments is set forth in the attached letter.

6. The authorization and consent clauses of subject contracts read as follows:

W-30-069-ORD-3182 (Bell Telephone Laboratories Purchase Order 139701).

"A. As to claims by others against the Contractor or the Laboratories or Western Electric Company, Incorporated or the United States Government by reason of claims for infringement or rights in, to or under patents by the manufacture, use or sale of any material or equipment furnished by the Contractor to the Laboratories under this Agreement, it is agreed as follows:

1. For the purposes set forth in Section 6, of the

## Exhibit A—(Continued)

Royalty Adjustment Act 1942 (Public No. 768, 77th Cong., 35 USC 68), and for no other purpose whatsoever, the Government shall, without prejudice to its rights of indemnification, if any, be deemed to have given its authorization and consent to the use and manufacture, in the performance of this contract or of any subcontract hereunder, (1) of any patented invention embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract and (2) of any patented invention utilized in machines or or methods the use of which necessarily results from compliance by the Contractor or the using subcontractor with (i) specifications or written provisions now or hereafter forming a part of this contract or (ii) specific written instructions given by the Contracting Officer for the [123] purpose of directing the manner of such performance.”

Contract DA-30-069-ORD-36 (Bell Telephone Laboratories Purchase Order 170919.

“Article 30. Authorization and Consent—The authorization and consent by the Government is hereby given (without prejudice to its rights of indemnification, if such rights are provided for in the purchase order) for all use and manufacture in the performance of this purchase order or any part hereof or any amendment hereto or any subcontract hereunder of any patented invention (i) embodied in the structure or composition of any Article the delivery of which is accepted by the Government

## Exhibit A—(Continued)

under this purchase order, or (ii) utilized in the machinery, tools or methods the use of which results from compliance by you or any using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this purchase order or (b) specific written instructions given by the Contracting Officer directing the manner of performance.”

Contract DA-30-069-ORD-125 (Western Electric Company, Inc., Purchase Order M-50852).

“Article 22. Our prime contract number DA30-069-ORD-125 contains authorization and consent clause ASPR 9-16.”

Contract DA-30-069-ORD-746 (Western Electric Company, Inc., Purchase Order M-52702).

“Article 22. Our prime contract number DA-30-069-ORD-746 contains authorization and consent clause ASPR 9-106.”

7. The word “necessarily” is apparently included in all of the above contracts, except BTL P.O. 170919.

8. Contractor considers Bell Telephone Laboratories Purchase Order 139701, issued under contract number W-30-069-ORD-3182, to be for research and development; Purchase Order 170919, issued under contract number DA-30-069-ORD-36, to be for both research and development and limited production; Western Electric Purchase Order M-50852 issued under contract number DA-30-069-ORD-125, to be a production contract; and Western Electric Company Purchase Order M-52702, issued under con-



## Exhibit A—(Continued)

tract number DA-30-069-ORD-746 to be a production contract.

Douglas Aircraft Company, Inc.

J. E. Coates, Patent Counsel. [124]

FEM: rnp

June 5, 1953

G-A-M-L-35

To: Contract and Royalty Section, Chief Patent Counsel, Bureau of Ordnance, Department of the Navy, Washington 25, D.C.

Attention: Mr. George Seavers

Subject: Contract NOa(s) 51-252, Contract NOa(s) 51-1061.

References: (a) Douglas Letter G-AN-L-13, 15 Dec. 1952; (b) Douglas Letter G-AN-L-25, 27 Feb. 1953; (c) Naval Speed Letter, BARR, Douglas Aircraft Co., Inc. SPDLTR DMK:wg, SER 2237, NOa(s) 51-252; NOa(s) 51-1061 G-AN-L-29, DTD 22 April 1953; (d) Bureau of Aeronautics Speedltr Serial 60374, NOa(s) 51-252 NOa(s) 51-1061, dtd 30 April 1953.

1. At the request of Mr. F. Daniel Frost of the firm of Gibson Dunn and Crutcher, Los Angeles, California, Counsel for the Edcliff Instrument Company, Pasadena, California, Contractor hereinafter sets forth the circumstances of the infringement matter between the Edcliff Company and the Bourns Laboratories of Riverside, California.

2. As the Navy Department has previously been



## Exhibit A—(Continued)

informed, Contractor and its sub-contractor, Bendix Aviation Corporation, have received formal notices of infringement with regard to Patent No. 2,515,981 owned by Bourns Laboratories, and covering Linear Motion Potentiometers.

3. Prior to receiving the Notice of Infringement from the Bourns Co., Contractor bought potentiometers, in the performance of work under subject contracts, from both Edcliff and Bourns, and used them in two distinct ways. Some of the instruments were incorporated in articles ultimately delivered to the Government, and others were retained in the Contractor's laboratories and used for various experimental purposes directly connected with subject contracts, such as specification testing, testing of sub-assemblies received from sub-contractors, and other operations of like nature. It is to be seen that with regard to the first group, the usual authorization is sufficient to protect Contractor, because the government actually accepts an article embodying the alleged infringing device. With regard to the second group of instruments, the authorization and consent clause does not operate because the alleged infringing device is never embodied in a structure or article which is delivered to the government, nor is [125] it required in the machinery, tools or methods called for by the applicable specifications.

4. Contractor desires a determination, at the earliest moment, either specifically authorizing Contractor to purchase the Edcliff device, or specifically informing Contractor to refrain from purchasing the Edcliff device.

## Exhibit A—(Continued)

5. Contractor desires to purchase the Edcliff device in the interest of both lower price and timely delivery. Contractor has purchased three different types of potentiometers from both companies. They are commonly known as single, double, and triple potentiometers, and apparently all are considered by Bourns to read on Patent No. 2,515,981. Their price "history" is approximately as follows:

	Single	Double	Triple
10/51	\$55 each	\$90 each	\$160 each
6/52	\$22 each	\$50 each	\$145 each
1/53	\$22 each	\$50 each	\$ 95 each

While undoubtedly some of the decline in the price of the instruments is attributable to increased production by the patentee, it is believed that a large share of the price decline is attributable to the appearance of a second source for the instruments.

Yours very truly,

Douglas Aircraft Company, Inc.

For, J. E. Coates, Patent Counsel.

FEM:rnp—cc: F. Daniel Frost, Gibson, Dunn & Crutcher. J. A. Dundas, E. Curtis, Washington Office. [126]

Exhibit A—(Continued)

Department of the Army  
Office of the Chief of Ordnance  
Washington 25, D.C.

[Seal of Dept. of Defense] (Copy)

In Reply Refer to: Douglas Aircraft Co., Inc.,  
Santa Monica, California. 8 June 1953

Attn: Mr. J. E. Coates, Patent Counsel.

Gentlemen:

This is in reply to your letter G-AN-L-33, dated  
May 11, 1953, on the subject of Contracts Nos:

W-30-069-Ord-3182

DA-30-069-Ord-36

DA-30-069-Ord-125

DA-30-069-Ord-746.

The first two contracts (Research and Development) contain Authorization and Consent Clauses, without the qualification "necessarily", giving authorization and consent "\* \* \* for all use in the performance of (the) contract or any part (thereof) or any amendment (thereto) or any subcontract (thereunder) \* \* \* of any patent invention \* \* \* (ii) utilized in \* \* \* methods the use of which results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions \* \* \*".

The last two contracts (Supply) contain Research and Development articles which provide that research and development or design incident to or

## Exhibit A—(Continued)

arising from the performance of these contracts shall be governed by the provisions of the basic contract W-30-069-Ord-3182. Therefore, these contracts, with respect to experimental activities thereunder, are dependent from the basic contract and its extension (DA-30-069-Ord-36).

For the foregoing reasons, this office is of the opinion that use “for various experimental purposes directly connected with subject contracts such as specification testing, testing of sub-assemblies received from sub-contractors, and other operations of like nature” is authorized under the existing terms of the contracts.

For the reason that your letter G-L-230 dated April 21, 1953 to Western Electric Co. recites “used for various experimental purposes” without the limitation “directly connected with subject contracts”, [127] it is emphasized that this opinion is limited to such various experimental purposes as are connected with subject contracts. Any generalized experimentation must be governed by the general law on the subject.

For the Chief of Ordnance:

Sincerely yours,

/s/ W. E. Thibodeau, Assistant

Exhibit A—(Continued)

Department of the Navy, Bureau of Ordnance

(Copy) Washington 25, D. C.

In reply refer to Ref:O'B;pjc A13-1 17 Jun 1953

Mr. J. E. Coates, Patent Counsel, Douglas Aircraft Co., Inc., Santa Monica Division, Santa Monica, California.

My dear Mr. Coates:

This is to advise that your letter of 5 June 1953 to the Contract and Royalty Section, Chief Patent Counsel, Bureau of Ordnance, Department of the Navy, Washington 25, D. C., regarding contracts NOa(s) 51-252 and NOa(s) 51-1061 has been forwarded to the Patent Counsel, Bureau of Aeronautics, as a matter under his cognizance.

A copy of the letter has also been provided Mr. George Seevers of the Patents Division of the Office of Naval Research for his information.

Sincerely yours,

/s/ G. D. O'Brien,

Bureau of Ordnance Patent Counsel. By direction of the Chief of Bureau.

Patent Department Received Jun 22 1953 Douglas Aircraft Company, Inc. [129]



## Exhibit A—(Continued)

June 17, 1953

(Copy)

G6-398

Mr. F. J. Schmitt, Patent Counsel, Bureau of Aeronautics, Dept. of Navy, Washington 25, D. C.

Re: Bourns vs. Edcliff Linear Potentiometer

Dear Sir:

I have now received further word from the home office to the effect that none of the subject potentiometers bought on the Navy account are retained by the Contractor but rather are placed in the proper assemblies and are delivered to the Navy.

The experimental and special testing work which we described in our recent letter actually takes place but is confined to the work which we are doing in connection with Army Ordnance contracts involving the same potentiometers.

I am enclosing for your information a copy of the Test Procedure for Model 1242 which will give an idea of the work done in our plant in checking the article. The subject potentiometers are in the feedback voltage circuits of the wing position indicators.

Since all of the Edcliff potentiometers purchased for the Navy have been delivered to the Navy, the authorization and consent clause in the contract properly covers them. However, we shall await your further advice on whether or not to resume purchasing from Edcliff.

Very truly yours,

Douglas Aircraft Co., Inc.

J.E.C.:le

J. E. Coates, Patent Counsel

Exhibit A—(Continued)

Department of the Navy, Bureau of Aeronautics  
Washington 25, D.C.

(Seal of the Dept. of Defense)

(Copy)

In reply refer to Aer-PL-1.

(Contract references deleted by order of U. S. Government)

Douglas Aircraft Company, Inc.  
Santa Monica, California

29 Jun 1953  
010657

Attention: Mr. J. E. Coates.

Gentlemen:

Receipt is acknowledged of your letter G6-398 dated 17 June 1953, forwarding a copy of "Test Procedure for Model 1242", and advising that all Edcliff potentiometers purchased for the Navy have been delivered to the Navy and therefore the authorization and consent clause in the contract properly covers such purchases.

Further action, therefore, by the Bureau of Aeronautics is unnecessary, particularly in view of the speed letter from this bureau dated 30 April 1953.

Sincerely yours,

/s/ F. J. Schmitt, Patent Counsel

Patent Department Received Jul 2-1953 Douglas  
Aircraft Company, Inc. [131]

[Endorsed]: Filed September 3, 1954.

[Title of District Court and Cause.]

## AFFIDAVIT OF LEONARD COMEGYS

State of California,  
County of Los Angeles—ss.

Leonard Comegys, being first duly sworn deposes and says:

He is Divisional Counsel for Bendix Aviation Corporation, Pacific Division, Plant No. 1, at North Hollywood, California, and that in the normal and ordinary course of his duties he has become familiar with and knows the contents of the records and files of that [132] corporation relating to the purchase by it of potentiometers from Edcliff Instruments. Said files reveal that all potentiometers purchased from Edcliff Instruments by Bendix Aviation Corporation, Pacific Division, have been purchased by said corporation in its capacity as subcontractor to Douglas Aircraft Company, Inc., and under and pursuant to United States Government contracts. Said files further reveal that all of said potentiometers have been or will be delivered to Douglas Aircraft Company, Inc., for ultimate delivery to the United States Government or for incorporation into devices manufactured for the United States Government and used by Douglas Aircraft Company, Inc., for research and development purposes directly in connection with United States Government classified projects.

/s/ LEONARD COMEGYS

Subscribed and sworn to before me this 20th day of August, 1954.

[Seal] /s/ ELENORE E. RICHARDSON,  
Notary Public in and for said  
County and State. [133]

[Endorsed]: Filed September 3, 1954.

---

[Title of District Court and Cause.]

### AFFIDAVIT OF WALTER J. JASON

State of California,  
County of Los Angeles—ss.

Walter J. Jason, being first duly sworn, deposes and says:

He is Patent Director for Consolidated Vultee Aircraft Corporation, San Diego, California, and that in the normal and ordinary course of his duties he has become familiar with the contents of the records and files of that company relating to the [134] purchase by Consolidated Vultee Aircraft Corporation of potentiometers from Edcliff Instruments. Said files reveal that all potentiometers purchased by Consolidated Vultee Aircraft Corporation from Edcliff Instruments have been purchased under and pursuant to United States Government contracts, that each of said contracts contains an authorization and consent clause, and that said potentiometers have been or are to be resold to and

paid for by the United States Government. Said files further reveal that all of said potentiometers have either been incorporated or will be incorporated by Consolidated Vultee Aircraft Corporation into devices which have been or will be delivered to the United States Government, or have been used by Consolidated Vultee Aircraft Corporation for research and development purposes in connection with United States Government classified projects.

Attached hereto and designated Exhibit "A" are true and accurate copies of correspondence between Consolidated Vultee Aircraft Corporation and various agencies of the United States Government in which the United States Government specifically authorized and consented to the purchase of potentiometers from Edcliff Instruments by Consolidated Vultee Aircraft Corporation under certain United States Government contracts.

/s/ WALTER J. JASON

Subscribed and sworn to before me this 26th day of August, 1954.

[Seal] /s/ L. A. BUNNEY,

Notary Public in and for said  
County and State

[135]



## EXHIBIT A

Convair (Copy) April 28, 1953

To: Chief, Bureau of Ordnance, Department of the Navy, Washington 25, D. C.

Subject: Contract NOrd-F-1492, and others.  
Pomona Guided Missile Facility.

1. Edcliff Instruments, Inc., a Pasadena, California company, has advised this office that it wishes to negotiate the sale of linear potentiometers to Convair's Guided Missile Division at Pomona. It is our understanding that these devices have been tested by our engineers and would be desirable for use at that division in effecting performance of our BuOrd contracts.

2. A patent infringement suit has been brought against Edcliff Instruments, Inc., by Bourns Laboratories of Riverside, charging that the linear potentiometers being offered for sale violate certain of the Bourns' patents.

3. Inasmuch as there is this question of possible patent infringement, the Contractor requests confirmation that our contracts with BuOrd relating to work done at the Pomona Division provides authorization and consent for our purchase and use of the subject devices, in order that any claim for relief by a patentee will be made against the United States in the Court of Claims and not against this Contractor.

4. The attorneys for Edcliff Instruments have

advised us that their client is willing to provide indemnification against patent infringement liability.

5. Information has been submitted to us to the effect that Mr. Edward C. Walsh, patent counsel for U. S. NOTS, had advised, or was advising, the Department of the Navy that the above mentioned law suit should not bar the Navy from purchasing Edcliff Instrument's linear potentiometers. Mr. Walsh became involved in this matter in connection with a request from Douglas Aircraft for permission to buy the subject linear potentiometers for use in the performance of a BuAir contract held by Douglas. [137]

6. Your advice is awaited as to whether Convair will be permitted to purchase the subject linear potentiometers from Edcliff Instruments, Inc.

Consolidated Vultee Aircraft Corp.  
San Diego Division  
Walter J. Jason,  
Acting Patent Director

WJJ:bh [138]

Received Patent Dept. Jun 16 1953 Consolidated  
Vultee Aircraft Corporation (Copy)

Ref: GTM:jgl NOrd-F-1492 8 June 1953

From: Chief, Bureau of Ordnance.

To: Consolidated Vultee Aircraft Corporation, San  
Diego 12, California.

Via: Bureau of Ordnance Representative, San Di-  
ego 12, California.

Subj: Letter of Intent NOrd-F-1492; Procurement  
of potentiometers thereunder.

Ref: (a) Convair ltr of 28 April 1953 to BUORD.

1. Reference (a), a copy of Convair's original letter to the Bureau of Ordnance, mailed 28 April 1953, was forwarded to this office by Coniar's Washington representative, Mr. J. P. Shaw. Since the original correspondence has not been located as of this time, copies of reference (a) will be routed to the various cognizant sections of the Bureau.

2. Subject Letter of Intent when converted into a definitive contract will contain the standard Authorization and Consent clause and the contractor is at this time advised that it may consider that said clause is in operation insofar as the work done at the Pomona Division under subject Letter of Intent is concerned. Under the Act of June 25, 1948 (28 U.S. Code 1498) which replaces the Act of June 25, 1910, as amended (35 U.S. Code 68), any suit for infringement of a patent by a contractor or by any subcontractor (including lower-tier subcontractors) in the performance of a Government contract must be brought against the Government in

the Court of Claims, and not against the contractor, if the Government gives its authorization or consent to the manufacture or use of the patented invention. The contractor is thereby protected from injunctive action in the performance of a Government contract, although the Government may not bear the ultimate liability in the event of recovery in the Court of Claims, such liability being dependent upon whether or not there is a Patent Indemnity clause in the contract.

3. The following is the clause which will be included in the definitive contract and is to be considered as approved for use under subject Letter of Intent:

#### Authorization and Consent

“The Government hereby gives its authorization and consent (without prejudice to its rights of indemnification, if such rights are provided for in this contract) for all use and manufacture, in the performance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract), of any patented invention (i) embodied in the structure or composition of any article the delivery of which is accepted by the Government [139] under this contract, or (ii) utilized in the machinery, tools or methods the use of which necessarily results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific written instructions given by

the Contracting Officer directing the manner of performance."

4. While it is not the general policy of the Bureau to participate or voice opinion in the specific source of procurement chosen by the contractor for the obtaining of supplies under Bureau of Ordnance contracts, the Bureau does, however, appreciate such matters being brought to its attention when the question of infringement is involved. It has always been presumed that such choice and procurement will be made in the best interest of the Government and will provide the best quality of material possible. To this end it might be stated that certain designs should be overlooked or discarded by the contractor merely for the reason that the question of infringement might arise, particularly when quality and/or low price may be sacrificed.

5. It is understood from reference (a) that Edcliff Instruments is willing to provide indemnification against patent infringement liability. Therefore, if procurement is made from this company, it is suggested that such provisions be incorporated in the subcontract.

6. In any event the contractor is hereby authorized to proceed with the purchasing of subject potentiometers under the provisions of the above clause.

M. F. Schoeffel

Gerald D. O'Brien, By Direction

Copy to: Mr. J. P. Shaw, Suite 801 World Center Building, 918 Sixteenth Street, N.W., Washington 6, D. C.



Distributed by Contracts (JPS) 15 June 1953 to:  
C. C. Sawyer, W. J. Jason, A. W. Abels, P. V.  
Ogden, NOrd-F-1492. [140]

Department of the Navy, Bureau of Ordnance  
Washington 25, D. C.

(Copy)

NIO Log No. 05622

Received Patent Dept. Jul 6 1953 Consolidated  
Vultee Aircraft Corporation.

In reply refer to REF:GDO:B:jgl NOrd F-1492  
20 June 1953

From: Chief, Bureau of Ordnance.

To: Consolidated Vultee Aircraft Corporation, San  
Diego 12, California.

Via: Bureau of Ordnance Representative, San Di-  
ego 12, California.

Subj: Letter of Intent NOrd F-1492; Procurement  
of Potentiometers.

Ref: (a) Convair ltr of 28 April 1953 to BUORD;  
(b) BUORD ltr Ref:GTM:jgl NOrd F-1492 of  
8 June 1953 to Convair.

1. Correction is requested of paragraph 4 of re-  
ference (b) which was written in reply to reference  
(a), the word "not" should be inserted at the end  
of line 8 of paragraph 4 so that the ultimate sen-  
tence of this paragraph will read as follows:

"To this end it might be stated that certain de-  
signs should not be overlooked or descarded by the  
contractor merely for the reason that the question  
of infringement might arise, particularly when  
quality and/or low price may be sacrificed."

M. F. Schoeffel

/s/ Gerald D. O'Brien, By Direction

First Endorsement July 1 1953. From: NIO. To:  
CVAC. For: Action Indicated: X Information.  
Dist. by Contracts Department (RAS) 3 July 1953:  
C. C. Sawyer, A. W. Abels, W. J. Jason, P. V.  
Ogden, F-1492 Chron. [141]

Department of the Navy, Bureau of Ordnance  
Washington 25, D. C.

Received Patent Dept. Aug. 11 1953 Consolidated  
Vultee Aircraft Corporation. (Copy)

NIO log 06853, Ref-GTM:vl, NOrd-11809, NOrd-  
11297, NOrd-10706, 28 July 1953.

From: Chief, Bureau of Ordnance.

To: Consolidated Vultee Aircraft Corporation, San  
Diego 12, California.

Via: Bureau of Aeronautics Representative, San  
Diego 12, California.

Subj: Contracts NOrd-11809; 11297 and 10706; Au-  
thorization to procure potentiometers there-  
under.

Ref: (a) Convair ltr WJJ/db of 16 Jul 1953 to  
BuOrd; (b) BuOrd ltr Ref:GTM:jgl NOrd-  
F-1492 of 8 Jun 1953 to Convair.

1. In accordance with the request of reference  
(a), authorization similar to that previously granted  
by reference (b) is hereby given for procurement of  
potentiometers under subject contracts.

2. It is suggested that indemnification provisions  
be obtained in any potentiometer purchases made

under subject contracts as was provided under NOrd-F-1492.

M. F. Schoeffel

/s/ G. D. O'Brien, By Direction

FJM:glw EN11-23/14      Ser 3153 dtd 4 Aug 1953  
First Endorsement on BuOrd ltr dtd 28 Jul 1953.  
From: Bureau of Aeronautics Representative, San  
Diego 12, California.

To: Naval Inspector of Ordnance, 1675 West 5th  
Street, P.O. Box 1011, Pomona, California.

1. Readdressed and forwarded as a matter under  
cognizance of your office.

C. W. Stirling

/s/ S. M. Arnold, By Direction

cc: BuOrd, Wash., D. C.

Dist. by Contracts (RAS) 10 August 1953 to: C. C.  
Sawyer, File-11809 Chron; W. J. Jason, File-  
11297 Chron; A. W. Abels, File-10706 Chron;  
P. V. Ogden, File F-1492 Chron. [142]

[Endorsed]: Filed September 3, 1954.

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[Title of District Court and Cause.]

### MINUTES OF THE COURT

Date: Sept. 8, 1954, at Los Angeles, Calif.

Present: Hon. Leon R. Yankwich, District Judge;

Deputy Clerk: John A. Childress; Reporter: None.

Counsel for Plaintiff: No appearance.

Counsel for Defendants: No appearance.

Proceedings: The Court endorses "Considered. Overruled" on objections of defendants heretofore lodged Sept. 3, 1954, to plaintiff's proposed findings, etc.; and endorses "Considered. Declined to adopt." on defendants' proposed findings heretofore lodged Sept. 3, 1954.

Findings and judgment proposed by plaintiff are approved and signed as corrected. The Court has considered and overruled objections of defendants as embodied in their proposed findings.

The Court is of the view that the findings and judgment signed, cover the issues as tendered, and that the affidavit as to use by the Gov't of instruments need not be considered now, though it may have a bearing on the accounting.

EDMUND L. SMITH, Clerk [160]

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[Title of District Court and Cause.]

## FINDINGS OF FACT AND CONCLUSIONS OF LAW

### Findings of Fact

#### I.

Plaintiff, Marlan E. Bourns, is a citizen of the United States and a resident of the City of Riverside, County of Riverside and State of California.

#### II.

Defendant, Edcliff Instruments, is a corporation

organized and existing under and by virtue of the laws of the State of California, formerly having a regular and established place of business at 850 South Fair Oaks, City of Pasadena, County of Los Angeles, State of California, and presently having a regular and established place of business at 383 North Foothill Boulevard, City of Pasadena, County of Los Angeles and State of California.

### III.

Defendant, Edmund W. Pitzer, is a citizen of the United States and a resident of the City of Altadena, County of Los Angeles and State of California.

### IV.

Defendant, Clifford Dillon, is a citizen of the United States and a resident of the City of Altadena, County of Los Angeles and State of California.

### V.

Defendant on counterclaims Bourns Laboratories Instrument Sales Corporation is a corporation organized and existing under and by virtue of the laws of the State of California, having a regular and established place of business in the City of Riverside, County of Riverside and State of California.

### VI.

Defendant on counterclaims, Bourns Position Instruments, Inc., is a corporation organized and existing under and by virtue of the laws of the State of California, having a regular and established



place of business in the City of Riverside, County of Riverside and State of California. [162]

## VII.

Plaintiff, Marlan E. Bourns, is the owner of all right, title and interest in and to United States Letters Patent No. 2,515,981.

## VIII.

Defendants, Edcliff Instruments, Edmund W. Pitzer, and Clifford Dillon have manufactured and sold, within the Southern District of California, City of Pasadena, County of Los Angeles, State of California and elsewhere in the United States, adjustable resistors known in the industry as potentiometers as exemplified by Defendants' Exhibit I and Plate 6 of Plaintiff's Exhibit 3; Plate 9 of Plaintiff's Exhibit 3; Defendants' Exhibit U and Plate 11 of Plaintiff's Exhibit 3; Defendants' Exhibit T and Plate 14 of Plaintiff's Exhibit 3; Plaintiff's Exhibit 30 and Plate 17 of Plaintiff's Exhibit 3; Plate 19 of Plaintiff's Exhibit 3, and Plate 20 of Plaintiff's Exhibit 3, and had manufactured and sold the said adjustable resistors within said District prior to the filing of the Complaint herein, and within the period of six years preceding the filing of the said Complaint.

## IX.

The invention of the Bourns' patent No. 2,515,981 resides in the provision of an adjustable resistor or potentiometer which upon movement of a con-

tact plate from one position to another relative to an electrical resistance element varies the electrical resistance in a circuit and which upon return of the contact plate to its initial position will provide the identical resistance in the circuit as existed prior to movement of the contact plate utilizing a cover having a resistance element and electrically conductive strip and a base having the combination of a shaft and post to position the contact plate with respect to the resistance element as defined by the single claim of the patent. [163]

## X.

The invention of the Bourns' patent in suit overcame a problem long existent in the art of telemetering conditions from a guided missile and provided a successful solution of that problem permitting accurate and dependable telemetering by virtue of the precise repeatability of the instruments constructed in accordance with the invention.

## XI.

The structures manufactured and sold by defendants as identified in Finding number 8 embody each and every element of the invention of the Letters Patent to Marlan E. Bourns, No. 2,515,981, which in operation do not differ at all from the operation of the adjustable resistor disclosed in the Bourns' Patent No. 2,515,981 in suit and as said structure is defined by the claim of said Letters Patent.

## XII.

Each and all of the elements of the defendants' structures as set forth in Finding number 8 cooperate in the same way to produce the same results and have the same mode of operation as the elements of the adjustable resistor disclosed and set forth in the Bourns' patent No. 2,515,981 and as defined in the claim of said Letters Patent.

## XIII.

That defendants' adjustable resistors as set forth in Finding number 8 infringe the claim of the Bourns' patent in suit.

## XIV.

That upon introduction of the adjustable resistor of the Bourns' patent in suit, the art extensively adopted the invention of the Bourns' patent and the invention of the Bourns' patent has been extensively recognized in the art as an invention prior to the filing of the Complaint in this action. [164]

## XV.

That the invention of the Bourns' patent No. 2,515,981 has had wide commercial success.

## XVI.

That the prior art relied upon by defendants does not disclose any instance of prior knowledge or invention of the combination disclosed in the Bourns' patent in suit, nor any solution of the problem in this art first solved by Marlan E. Bourns.

## XVII.

That it required the exercise of inventive faculty to invent the combination defined by the claim of Letters Patent No. 2,515,981.

## XVIII.

That the combination of elements defined by the claim of Letters Patent No. 2,515,981 produces a result in excess of the accumulation of results of the individual elements.

## XIX.

That the prior patents relied upon by the defendants to anticipate or limit the claims of the Letters Patent in suit do not teach a solution of the problem first successfully solved by Marlan E. Bourns.

## XX.

That the claim of the Bourns' patent in suit, No. 2,515,981, defines an invention made by Marlan E. Bourns which overcame the problem existing in this art.

## XXI.

That the defendants did not appropriate any trade secrets from plaintiff. [165]

## XXII.

That there has been no confusion in the industry as to the source of instruments sold by defendants.

## Conclusions of Law

## I.

The Letters Patent No. 2,515,981 was duly and

legally issued on July 18, 1950 upon the application of Marlan E. Bourns. That plaintiff, Marlan E. Bourns, is the owner of the entire right, title and interest in and to said Letters Patent.

## II.

That Letters Patent No. 2,515,981 in suit is good and valid in law and that said patent and the claim thereof covers a new and meritorious invention.

## III.

That defendant has infringed the claim of the Letters Patent in suit by the manufacture and sale of devices exemplified by Defendants' Exhibit I and Plate 6 of Plaintiff's Exhibit 3; Plate 9 of Plaintiff's Exhibit 3; Defendants' Exhibit U and Plate 11 of Plaintiff's Exhibit 3; Defendants' Exhibit T and Plate 14 of Plaintiff's Exhibit 3; Plaintiff's Exhibit 30 and Plate 17 of Plaintiff's Exhibit 3, and Plate 19 of Plaintiff's Exhibit 3, and Plate 20 of Plaintiff's Exhibit 3.

## IV.

That plaintiff is entitled to a judgment for an injunction and accounting with costs as prayed for in the amended Complaint filed herein with respect to the first cause of action for patent infringement.

## V.

That defendant has not competed unfairly with plaintiff.



## VI.

That plaintiff recover nothing by the second cause of action for unfair competition.

Dated: September 8, 1954.

/s/ LEON R. YANKWICH,

United States District Judge. [167]

[Endorsed]: Lodged July 20, 1954.

[Endorsed]: Filed September 8, 1954.

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In the United States District Court for the Southern District of California, Central Division

Civil Action No. 14764-Y.

Marlan E. Bourns, doing business under the fictitious firm name and style of Bourns Laboratories, Plaintiff, vs. Edcliff Instruments, Edmund W. Pitzer and Clifford Dillon, Defendants.

Edcliff Instruments, Edmund W. Pitzer and Clifford Dillon, Defendants and Counterclaimants, vs. Marlan E. Bourns, doing business under the fictitious firm name and style of Bourns Laboratories, Plaintiff and Defendant on Counterclaims, and Bourns Laboratories Instrument Sales Corporation and Bourns Position Instruments, Inc., Defendants on Counterclaims.

## JUDGMENT

This cause having come on to be heard, and the Court having made and entered its Findings of Fact and Conclusions of Law pursuant to Rule 52

of the Rules of Civil Procedure, it is hereby adjudged and decreed as follows: [169]

1. That plaintiff is the owner of the entire right, title and interest in and to Letters Patent No. 2,515,981, granted July 18, 1950 to Marlan E. Bourns for adjustable resistors, together with all rights of action for infringement thereof.

2. That said Letters Patent No. 2,515,981 and the claim thereof, is good and valid in law.

3. That defendants have infringed Letters Patent No. 2,515,981, and the single claim thereof by the manufacture and sale of adjustable resistors as exemplified by Defendants' Exhibit I and Plate 6 of Plaintiff's Exhibit 3; Plate 9 of Plaintiff's Exhibit 3; Defendants' Exhibit U and Plate 11 of Plaintiff's Exhibit 3; Defendants' Exhibit T and Plate 14 of Plaintiff's Exhibit 3; Plaintiff's Exhibit 30 and Plate 17 of Plaintiff's Exhibit 3; Plate 19 of Plaintiff's Exhibit 3, and Plate 20 of Plaintiff's Exhibit 3.

4. That defendants have not competed unfairly with plaintiff.

5. That plaintiff herein have judgment on its amended Complaint for infringement of Letters Patent No. 2,515,981 as prayed for.

6. That plaintiff recover nothing by the second cause of action for unfair competition.

7. That defendants having abandoned its First Counterclaim claiming violation of the Anti-Trust Laws of the United States and having offered no evidence in support of said Counterclaim, the same is dismissed with prejudice. [170]

8. That defendants having abandoned its Second Counterclaim claiming unfair competition and having offered no evidence in support of said Counterclaim the same is dismissed with prejudice.

9. That defendants having abandoned its Third Counterclaim claiming mismarking under Section 50 of Title 35 of the U. S. Code and having offered no evidence in support of said Counterclaim, the same is dismissed with prejudice.

10. That defendants' Fourth Counterclaim for a declaratory judgment with respect to the validity and infringement of United States Letters Patent No. 2,515,981 is dismissed.

11. That pursuant to the agreement of the parties on pages 500 to 502 of the record all claims and counterclaims based upon Letters Patent No. 2,515,980 are dismissed without prejudice.

12. That a perpetual injunction be issued out of and under the seal of this Court restraining the defendants, its officers, agents, servants, employees and those persons, companies or corporations in active concert or participation with them, from using, or causing to be used, or offering, or threatening to use, or selling or offering for sale, or threatening to sell or contribute to the use of the combination patented in and by the said Letters Patent No. 2,515,981.

13. That plaintiff recover from defendants general damages which shall be due compensation for the making, using, or selling of the combination of the invention of the Letters Patent in suit, together

with such costs and interests as may be fixed by the Court. [171]

14. That plaintiff recover from said defendants the taxable costs of the plaintiff in this court and that the plaintiff shall have judgment and execution against the said defendants for said costs. Costs taxed at \$1,071.41.

Dated this 8th day of September, 1954.

/s/ LEON R. YANKWICH,

United States District Judge. [172]

[Endorsed]: Lodged July 20, 1954. Filed and entered September 8, 1954.

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[Title of District Court and Cause.]

### NOTICE OF APPEAL

To the Clerk of the Above Entitled Court and to the Plaintiff, Marlan E. Bourns and to Lyon & Lyon and Lewis E. Lyon, Esq., His Attorneys:

Notice is hereby given that defendants, Edcliff Instruments, [174] Edmund W. Pitzer, and Clifford Dillon, and each of them, appeal to the United States Court of Appeals for the Ninth Circuit, from those portions only of the Interlocutory Judgment and Decree entered in the above entitled action on September 8, 1954, in which it is adjudged and decreed:

- 1) That U. S. Patent No. 2,515,981 is valid;
- 2) That defendants, and each of them, have infringed said U. S. Patent No. 2,515,981 by the man-

ufacture and sale of the devices described in paragraph 3 of said Interlocutory Judgment;

3) That Counterclaim IV of the Amended Counterclaims for declaratory relief with respect to the validity and infringement of said U. S. Patent No. 2,515,981 be dismissed;

4) That a perpetual injunction be issued restraining said defendants from using, or causing to be used, or offering, or threatening to use, or selling or offering for sale, or threatening to sell, or contributing to the use of the combination patented in and by the said Letters Patent No. 2,515,981;

5) That plaintiff recover from defendants general damages as due compensation for the making, using or selling of the combination patented in and by U. S. Patent No. 2,515,981, together with costs and interests; and

6) That plaintiff recover the taxable costs in the within action.

Dated: October 6, 1954.

GIBSON, DUNN & CRUTCHER

/s/ By SAMUEL O. PRUITT, JR.

Attorneys for Defendants and  
Counterclaimants. [175]

Receipt of Service attached. [176]

[Endorsed]: Filed October 6, 1954.



[Title of District Court and Cause.]

### CERTIFICATE OF CLERK

I, Edmund L. Smith, Clerk of the United States District Court for the Southern District of California, do hereby certify that the foregoing pages numbered from 1 to 188, inclusive, contain the original Amended Complaint; Answer; Amended Counterclaims; Reply of Plaintiff to Counterclaims, etc.; Notice of Motion for a Partial Summary Judgment, etc.; Separate Affidavits of Raymond E. Bossarte, Leonard Comegys, Clifford Dillon (two), Clyde V. Grant, Jr., Marion J. Kruzic, Frederick E. MacArthur, Jr. (two), Edmund W. Pitzer, and John C. Warner; Memorandum in Opposition to Motion for Partial Summary Judgment; Defendants' Notice Under 35 U.S.C. 282; Opinion; Decision; Objections of Defendants to Plaintiff's Proposed Findings of Fact, Conclusions of Law and Judgment; Affidavit of J. E. Coates; Affidavit of Leonard Comegys; Affidavit of Walter J. Jason; Proposed Findings of Fact and Conclusions of Law; Proposed Interlocutory Judgment; Findings of Fact and Conclusions of Law; Judgment; Notice of Appeal; Designation of Record on Appeal and Stipulation re Designation of Record on Appeal and a full, true and correct copy of Minutes of the Court for February 15 and September 8, 1954 which, together with the original exhibits and Reporter's Transcript of Proceedings, transmitted

herewith, constitute the transcript of record on appeal to the United States Court of Appeals for the Ninth Circuit.

I further certify that my fees for preparing and certifying the foregoing record amount to \$2.00 which sum has been paid to me by appellants.

Witness my hand and the seal of said District Court this 12th day of November, A.D. 1954.

[Seal] EDMUND L. SMITH,  
Clerk.

/s/ By THEODORE HOCKE,  
Chief Deputy.

In the United States District Court for the Southern District of California, Central Division

No. 14,764-Y—Civil

MARLAN E. BOURNS, doing business under the  
fictitious firm name and style of BOURNS  
LABORATORIES, Plaintiff,

vs.

EDCLIFF INSTRUMENTS, EDMUND W.  
PITZER, and CLIFFORD DILLON,  
Defendants.

### TRANSCRIPT OF PROCEEDINGS

Los Angeles, Calif., Tuesday, June 22, 1954

Honorable Leon R. Yankwich, Judge presiding.

Appearances: For the Plaintiff: Lyon & Lyon,  
by Lewis E. Lyon and R. Douglas Lyon, 811 W. 7th

St., Los Angeles 17, Calif. For the Defendants: Gibson, Dunn & Crutcher, by Samuel O. Pruitt, Jr., and Glenn Warner, 634 So. Spring St., Los Angeles 14, Calif., and Robert L. Parker, Jr., 595 East Colorado St., Pasadena 1, Calif. [1\*]

\* \* \* \* \*

Mr. Lewis E. Lyon: This, your Honor, is a patent case involving at the present time two letters patent, both of which issue on this same basic application filed in the Patent Office, one of the patents being a divisional patent granted upon a divisional application.

At this time I will offer in evidence and give the court an extra copy of the two soft copies of the letters patent in suit.

The Court: All right. They may be received.

Mr. Lewis E. Lyon: I am offering as Plaintiff's Exhibit 1 the Marlan E. Bourns patent No. 2,515,980, issued July 18, 1950.

The Clerk: 1 in evidence.

(The document referred to was marked Plaintiff's Exhibit 1, and was received in evidence.)

[See Book of Exhibits.]

Mr. Lewis E. Lyon: Here is the extra copy for the court. And I offer the Marlan E. Bourns patent No. 2,515,981, also issued July 18, 1950, as Plaintiff's Exhibit No. 2, supplying an extra copy also of that patent for the convenience of the court.

The Clerk: 2 in evidence.

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\* Page numbers appearing at top of page of original Reporter's Transcript of Record.

(The document referred to was marked Plaintiff's Exhibit 2, and was received in evidence.)

[See Book of Exhibits.]

Mr. Lewis E. Lyon: So the court may have before it an illustration of the structures alleged to infringe the two patents in suit, I have prepared colored drawings of the defendants' and plaintiff's structures of the patent in suit, in which the claims which will be relied upon of the two patents are broken down, and I will offer at this time as Plaintiff's Exhibit 3 the book as thus described, subject to the evidence with respect to its preparation, it being offered for the purpose of illustrating the plaintiff's position in this matter. And I have an extra copy of that book, Plaintiff's Exhibit 3, for the court.

Mr. Pruitt: Your Honor, I interpose the objection at this time tentatively that we do not stipulate that the illustrations properly depict either the patent illustration, or what is shown, but we have no objection to its being offered for identification purposes at this time.

The Court: The object is merely to illustrate counsel's [4] conception of the patent, and, as such, is admissible just like a summary from books. We do not have to accept the implications. They merely illustrate what they conceive the claims to be and what the infringement is.

Mr. Pruitt: I certainly have no objection if it is offered for that purpose, your Honor.

The Court: All right. Overruled. It may be received.



The Clerk: Plaintiff's Exhibit 3 in evidence.

(The document referred to was marked Plaintiff's Exhibit 3, and was received in evidence.)

Mr. Lewis E. Lyon: The patents in this suit relate to devices which are commonly referred to and will be here referred to as potentiometers, although the two patents in suit are entitled adjustable resistors.

In order that the court may perhaps have a better visual understanding of the structures of the patent, I am going to present here at the present time one of the earliest models of the potentiometer which was constructed by the plaintiff and for the plaintiff by the defendant, Mr. Pitzer. This model closely approximates——

The Court: Tell me—I have forgotten, gentlemen, even though this matter has been before me on several occasions, in what field these are used.

Mr. Lewis E. Lyon: I will get to that. I just want to get the model before you. [5]

The principal field of these structures at the present time, as the evidence will develop, is in the field of guided missiles or aeronautics or airplane structures. They are variable resistors which enable certain instruments or certain elements to be properly related to the electrical circuit of those devices in use, and they are very exact instruments, as the evidence will bring out.

This model, which is like Figure 6 of Exhibit 1 or 2, the drawings of the two patents being the same, except this device is a square shaft device, and the patent in suit in Figure 6 shows a round



shaft. I will ask that this model, for the purpose of illustrating the structures, be received as Plaintiff's Exhibit 4.

The Clerk: Is this admitted, your Honor?

The Court: It may be received.

The Clerk: 4 in evidence.

(The document referred to was marked Plaintiff's Exhibit 4, and was received in evidence.)

Mr. Pruitt: Do you have any objection if we examine the internal structure of that?

Mr. Lewis E. Lyon: None whatsoever at any time. If your Honor will refer to plate 10 of the illustrative colored book, Exhibit 3, you will find there pictured another of the potentiometers.

So the court may have a correct understanding of the relative size of these devices, as they are somewhat blown up in these illustrations for the purpose of illustration, I am going to present at this time an additional model, this being a model of the structure shown on plate 10 of Exhibit 3, as Plaintiff's Exhibit 5.

The Clerk: Is this admitted, your Honor?

The Court: It may be admitted.

The Clerk: Plaintiff's 5 in evidence.

(The instrument referred to was marked Plaintiff's Exhibit 5, and was received in evidence.)

Mr. Lewis E. Lyon: There have been subpoenaed and requested certain early models of the earliest models of potentiometers made by the plaintiff Mr. Bourns, and, also, one of those first models has a transparent cover on it, which enables the court to

see better the internal structure of the device. I am going to present and offer in evidence at this time what I understand is the first linear motion potentiometer made by the plaintiff, Mr. Bourns, as Plaintiff's Exhibit 6. [7]

The Clerk: Is this admitted, your Honor?

The Court: It may be received.

The Clerk: 6 in evidence.

(The instrument referred to was marked Plaintiff's Exhibit 6, and was received in evidence.)

Mr. Lewis E. Lyon: Your Honor will undoubtedly remember that in elementary physics one of the demonstrations first made of the phenomena of the transfer of electrical current was the fact that an incandescent lamp was hooked up with a battery or source of electric current, and in the wires connected with the lamp there was inserted a variable resistance, and that variable resistance was moved back and forth, and when you did the light got dimmer as more resistance was put in the circuit, and the light got brighter as the resistance in the circuit was lessened. That was a variable resistor. The problem which here confronted the plaintiff, however, was a problem of a great deal different magnitude than that. The plaintiff, Mr. Bourns, is an engineer, trained in electrical engineering, and was manufacturing certain devices when there was presented to him the problem which existed in the art of guided missiles in aircraft construction of producing a potentiometer which was a repeatable potentiometer. Now, by "repeatable", and taking one

of these models as an example, a structure which was accurate to the nth degree, so that if this shaft of this model Exhibit 6, which I have in my hand, is moved to a certain position, it depended upon the instrumentality to which it was connected, that there would at all times, when you returned to that position, be exactly the same resistance in that electric circuit. Not a matter of variation, but exactly the same, so that the instrument was repeatable and accurate to the degree required in order to carry out the desired operations in aircraft or guided missile operation and construction.

If your Honor will refer to Figure 6, which I believe is the easiest of the figures to see, of either Plaintiff's Exhibit 1 or 2, you will find therein pictured the potentiometer or variable resistance of which we are speaking. Now, that variable resistance or potentiometer includes a body or base, which is therein pictured as the lower portion, I believe numbered 61. Secured to that base is a cover or top, which in that figure is numbered 72.

The Court: What sort of metal is this constructed of?

Mr. Lewis E. Lyon: That is constructed of plastic, aluminum or other suitable material, in order that the exact refinements of construction may be had. It is not necessarily a metal.

The Court: Is it material whether that will be or will not be a conductor?

Mr. Lewis E. Lyon: It does not make any difference the way this structure is made, as long as there is proper [9] insulation, as for example in Exhibit

5 structure the base is of aluminum. In Exhibit 6 or 4 the base is aluminum, and the same is true of the Exhibit 5.

Mounted on that base is what is usually an insulated material, a cover 72, which is usually formed of a suitable nonconductive structure or plastic material or bakelite, something of that character, which is generally nonconductive. Now, in order to provide the variable resistance there is a coil of wire shown in Figure 6, which is indicated at 73, and that coil of wire is adapted to be contacted with a spring contact plate 69, and that spring contact plate is carried as the patent states upon a post 66, which is secured to an operating shaft 64. Now, as you move the shaft 64 in or out of the structure, you slide the contact plate 69 along so that it engages different turns of the wire of the coil 73 along the length of that coil, and the problem is to be sure that you always return to precisely the same point on the same turn. And although these pictures are rather large, the wire of that coil may be and is at many times extremely fine, as fine as human hair, in order that you get this exact adjustment, and you use a contact button in contact with that wire so that you repeat that position.

Now, one of the important problems which was faced in this structure was to build a structure in which you could be certain that the part stayed in permanent relation one to [10] the other. The coil of wire is at its contact surface a curved surface, so that the wires are wound around, and where the contact button of the contact plate or the curved



surface of the contact plate engages the wire there was one curved surface against another. That requires that you maintain these parts in definite set relations, so that you have the operating shaft 64, the post 66, the contact plate 69 with its curved surface engaging a curved portion of the coil.

Now, if you have rotation or relative movement of those parts in that combination so that the tendency is for the contact curved surface of the contact plate 69 to engage the wire at variable points around its curved surface, you will see that you could not return to precisely the same point, and you would not have a repeatable instrument, one which would be of the degree of accuracy required, and it is to the production of such a repeatable instrument where the parts are so oriented as to make this repetition possible that the claims of these patents are related. [11]

Now, Mr. Bourns started into this field, as I stated, not many years ago. Then this problem was presented to him by Consolidated Vultee in the guided missile field, he at that time being in the business of manufacturing another structure, and they pointed out to him the fact that their program was failing considerably because there was no instrument which they could obtain upon the market which would solve the problem presented by these missiles, and their structure and the failure of the potentiometers to operate within the precision required.

Mr. Bourns said, "I will undertake to make such a structure for you."



So we here have perhaps as one of the issues of this case an allegation that Mr. Bourns' own early activities antedate his own patent, because Mr. Bourns undertook an experimental contract to build a structure for the Consolidated Vultee on their one requirement, "What we want you to build is a potentiometer to the precision of five-hundredths of a degree accuracy."

Now, this question of anticipation of a patent by a person's own activity is nothing new to the patent field.

The Court: Let's confine ourselves here. You know by now that I do not like the old-fashioned opening statement, which was really an argument. Let's confine ourselves to the facts you are going to prove, then swear in the witnesses, [12] and then argue the case later.

Mr. Lewis E. Lyon: Yes, your Honor. The only thing I was trying to place before the court was as to what the issues are.

The Court: That is all right. I know what anticipation is, so let's confine ourselves to the issues, and then let's have the proof.

Mr. Lewis E. Lyon: I don't want to argue the case either, your Honor, at the present time.

The Court: All right.

Mr. Lewis E. Lyon: I want to get to the court an understanding of the structures, and an understanding of the patents, and then I will put on the evidence.

The Court: All right.

Mr. Lewis E. Lyon: I believe that I have got

before the court at the present time the structures, the patents, and our position, as graphically shown in Exhibit 3. \* \* \* \* \* [13]

The Court: All right. I will hear from counsel.

The Clerk: Mr. Samuel Pruitt.

Mr. Pruitt: May it please the court: Your Honor, we have filed a rather extensive pretrial memorandum, which I apologize for in saying that it includes quite a bit of argument.

The Court: I showed it to a visiting judge, and told him of the interpretation put on the word "memorandum." It is 156 pages long.

Mr. Pruitt: I apologize for the weight and length of it, but I thought it necessary to put before the court the lack of invention in the subject patents, and the lack of infringement of the numerous devices which are claimed to infringe, to form a pertinent record before the court as the occasion arises.

The Court: All right.

Mr. Pruitt: I will be quite brief. Mr. Lyon has pointed out that there are two patents in issue.

Now, in the filing of their pretrial memorandum last week, Monday of last week, plaintiff states that the model C type instrument manufactured by the defendants is not claimed to infringe the '980 patent, and I am not advised of any other instrument that has ever been manufactured by the defendants which is claimed to infringe the '980 patent. [17] So, so far as I know, the '980 patent is not involved in the infringement claim of the patents.

I have discussed this matter with Mr. Lyon, and I expect to show him drawings of models of certain

instruments to satisfy him as to whether or not he intends to press any claim under the '980 patent, and I think there is some likelihood that that patent will be eliminated from the case.

The Court: Unless, it being a split patent, and there is only one claim in evidence, they are so tied that they have to be considered together in order to understand the situation.

Mr. Pruitt: I think that is clearly true, your Honor, that especially the file wrapper of the '980 patent is highly material, we think, to the proper construction of the single claim of the divisional patent.

With respect to the art which Mr. Lyon referred to, briefly, I think our evidence will show that long prior to the filing date of Mr. Bourns' invention there were manufactured in this country, and there was well known in the art that there were being manufactured accurate wire-wound resistors, both used as adjustable resistors, or as potentiometers, and I think the evidence will further show that the accuracy and the repeatability of the variable resistance depends primarily and almost wholly on the quality of the resistance winding.

The Court: Tell me what function they perform in the field. [18]

Mr. Pruitt: As I understand it, your Honor——

The Court: To say they are resistors is a little general. What do they do? Do they help stabilize something in the air, or what?

Mr. Pruitt: As I understand it, the primary use of the instruments in suit is to provide telemetering

information by transferring an electrical signal based upon the amount of resistance in a circuit, to determine the amount of mechanical movement that is indicated by this electrical change in resistance. I must confess that I am not personally familiar with the exact use to which these instruments are being put by the persons engaged in the guided missile program.

I think, generally speaking, they are used for telemetering purposes.

The Court: All right.

Mr. Pruitt: The prior art will not only show, I think, that the accurate resistor or potentiometer was well known in the art at the time of the filing of the application for this patent, but that the various elements of the claim of the '981 patent were shown in various eastern patents as of that date, and not only were the individual elements shown, but we think the combination itself was shown in at least three of the patents relied upon by the defendants as prior art.

We have filed our pretrial memorandum, and Exhibit C, [19] which shows copies of those patents relied upon as prior art, and at the proper time I will introduce these documents into the record.

The Court: I notice in patent '980 there is quite a number of references cited, and in patent '981 only two are cited.

Mr. Pruitt: True, your Honor.

The Court: Some are the same. Rubinstein and Batcheller are cited. Have you any patents in addition to those cited there? [20]



Mr. Pruitt: Yes, your Honor, we rely particularly upon a patent to W. E. Schauer, being No. 2,280,305, application filed April——

The Court: Is that 2,280,385?

Mr. Pruitt: '305. That is shown in Exhibit C, No. 2 of the exhibits filed with our pretrial memorandum.

The Court: All right. Just so I get the issues. Is that your best reference?

Mr. Pruitt: We rely just as much, your Honor, on the Rubinstein patent, which was cited by the Patent Office. And there is another reference, W. J. Thayer, which is No. 3 in our exhibit which we rely on.

The Court: All right. As long as we don't roam all over the field of mechanical and electro sciences.

Mr. Pruitt: No, your Honor, we hope to confine it to the issues.

In connection with our theory of lack of infringement, or our lack of invention argument, and our non-infringement argument, we think that the most that the Bourns '981 claim can cover is the particular structural relationship between his round shaft reciprocating in a groove and the transversely mounted post which prevented rotation of the shaft, and thus maintain contact between the contract arms and the resistance element. We think that that particular feature is something that a mechanic skilled in the art could devise in the light [21] of the prior art. And we further think that none of the defendants' devices incorporate that particular structure. \* \* \* \* \* [22]



There is one other issue, which was not mentioned by Mr. Lyon, and that is in defense of the infringement claims we have set forth the fact, and we will offer evidence to establish that fact, that substantially all of the accused devices have been sold either directly to the United States Government or to the contractors and subcontractors of the United States Government. I think as of now all but 20 devices have been so sold.

We expect to prove that the contract under which these instruments were purchased by these persons had a standard contract clause called the authorization and consent clause, which announces in advance the Government's consent to the purchase of claimed infringing devices. We expect to prove, also, that substantially all of the devices were incorporated [25] into some other device, which was ultimately delivered and accepted by the United States Government.

We also expect to prove that in the case of the largest customers of defendants, and I think—this is from memory, but I think it will cover approximately 80 per cent of the devices sold—that the contractors wrote to the proper official of United States Government setting forth the claimed infringement, and requesting specific authorization by the Government to purchase the devices from the defendants, and we will——

The Court: What bearing does that have? The Government can't give you authorization to infringe somebody else's patent.

Mr. Pruitt: My point is under Section 1498 of

Title 28, it provides that if the Government has given its authorization and consent to the purchase of devices which are accused devices in a patent infringement suit, the patentee's sole remedy is in the Court of Claims, and this court lacks jurisdiction to determine damages or injunction for infringement to the extent that the devices were sold to the Government, so it is one of the important issues in this case, your Honor, because it relates to the jurisdiction of this court.

As I was saying, we expect to introduce the original letters from the proper contracting officer of the Government specifically authorizing the purchase of the devices from [26] the defendants.

The Court: That won't oust the jurisdiction of this court from passing on invalidity or unfair competition. It would only be a question of damages. I might not be able to award damages, but I could make an interlocutory decree finding infringement, finding unfair competition, and then refer it to the Court of Claims for adjudication of damages, instead of a master. See, I am very jealous of the jurisdiction of this court, and there have been many occasions when either courts or Congress have tried to oust me when I wouldn't be ousted. I won out recently when the whole Congress of the United States, the Senate and House, tried to oust me from jurisdiction, but they didn't know as much as I did about the case. And I tried the case and decided it, and now they have released the Attorney General, and he is defending my judgment. So it just shows you how jealous I am of the jurisdiction.

Mr. Pruitt: I should have pointed out, in addition to the fact you mentioned, that the defendants have counterclaimed for declaratory relief, asking that the court adjudicate the validity or invalidity, and the infringement or non-infringement.

The Court: Yes, we can do it regardless of that section. We will take a short recess.

\* \* \* \* \* [27]

### MARLAN E. BOURNS

the plaintiff herein, called as a witness in his own behalf, having been first duly sworn, was examined and testified as follows:

#### Direct Examination

The Clerk: What is your name, please?

The Witness: Marlan E. Bourns.

The Clerk: Thank you.

Q. By Mr. Lyon: Where do you reside, Mr. Bourns?

A. 2482 Carlton Place, Riverside.

Q. What is your occupation?

A. We manufacture electrical instruments.

Q. How long have you been engaged in that business?

A. Since the fall of 1946, or the early winter.

Q. What is your training?

A. Physics major, with many courses in the engineering college of the University of Michigan.

Q. After leaving Michigan, or during the time you were at Michigan, what did you do in following the electrical engineering profession?

(Testimony of Marlan E. Bourns.)

The Court: By physics major, I assume you mean you got a Bachelor of Science degree? [28]

The Witness: That is correct; in physics.

The Court: Majoring in physics?

The Witness: Correct.

Q. By Mr. Lyon: The question is: After or during the time you were still in Michigan, the University of Michigan, what did you do in following the electrical engineering profession?

A. A few weeks prior to graduation I accepted full time employment by the University of Michigan in engineering research on a secret electronic project.

Q. Ultimately determined to be what project?

A. I am frankly not sure whether I am in a position to say or not. It is one of the main top secret projects of the last war.

Mr. Lyon: It has been publicized since then.

The Court: It isn't important, and I think we would rather not have it. We are not senators, Mr. Bourns, so we do not assume the right to have you disclose secrets, and that is true except when the Government brings a law suit. If the Government brings a law suit, then we tell them, "You didn't need to bring it unless you wanted to disclose the contract." For instance, they brought a case recently and they didn't want to disclose a contract, and I said, "All right, dismiss your law suit if you don't want to disclose it." But this is not of any importance, and I will relieve you of [29] the necessity to answer.



(Testimony of Marlan E. Bourns.)

Q. By Mr. Lyon: All right. How long did you continue in the pursuit of that research problem?

A. Following my employment by the University of Michigan, and during that employment, in fact, I was sent to Cal Tech on the same project, and worked on the University of Michigan payroll at Cal Tech for several months, and thereupon was transferred to Cal Tech's payroll.

Cal Tech was working on this project with the Naval Ordnance Test Station, and with General Tire & Rubber, so that employment by all three groups on the same basic job followed.

Q. The question was: How long did that last?

A. About a year and a half at the University of Michigan, as I recall, and approximately a year with the other three organizations in California.

Q. All right. Following the completion of your connection with that job, what did you do in the electrical engineering field, if anything?

A. I intended to go into business for myself, making electronic devices, and once considered making oscilloscopes or telemetering transmitters on which a patent was applied for, and various electronic devices of that type.

Q. You say you intended to. Did something interrupt those intentions? [30]

A. Well, actually we needed some money to keep going, and it was apparent that the electronic devices would take considerable development, so it appeared that it would be of more immediate mone-



(Testimony of Marlan E. Bourns.)

tary value to solve a problem which I had become familiar with through Convair.

Q. And what problem was that?

A. Convair was having a great amount of difficulty with a vane unit they were using on their missile.

Mr. Pruitt: Just a minute. Your Honor, I object to this as testimony which is not within the knowledge of the witness unless he had some conversation.

The Court: He stated he became familiar with it, and he puts it in that way. It came to your attention?

The Witness: That is correct.

Q. By Mr. Lyon: By Convair, you mean whom?

A. Consolidated Vultee Aircraft Corporation, and the Downey plant, specifically.

The Court: In patent cases in many instances it is permitted that the witness who claims invention can state the problem that existed in the industry, or in the branch of knowledge, and it isn't hearsay provided he himself was aware of the problem. Whether he came to it by personal experiments or whether people with whom he dealt called it to his attention becomes important because the patentability may depend upon the existence of the problem and the manner in which he [31] solved it. An invention may arise, if he solves it in a manner which was not apparent to anyone before. And so we have in all these cases the problem which

(Testimony of Marlan E. Bourns.)

confronted the inventor, unless you deal with a simple mechanical thing.

All right, go ahead.

Q. By Mr. Lyon: You say you became acquainted with this problem at Vultee, or at Consolidated Vultee, Convair. And what was the problem?

A. It was the desire of Convair to measure the angle of attack and the angle of the yaw of a missile as it was flying through the air, and in order to do this they had previously employed a rather complex device, with an open case, as I recall, on which a vane was mounted to a gear, and a gear reduction was provided from that assembly to a rotary potentiometer. They stated that a great deal of difficulty had been encountered in backlash of the gears and through malfunction of the pot, and failure of repeatability, plus excessive friction.

Q. Now, you used a word there, Mr. Bourns, "pot." What did you mean by that word?

A. "Pot" is quite often used in engineering terminology as an abbreviation for potentiometer.

Q. So that when you use, as you probably will in your testimony, the word "pot," you are referring to potentiometer?

A. That is correct, yes. I probably can't help it. [32]

Q. All right. Now, you stated that they were using a rotary potentiometer at Convair. Will you elaborate on that? What were they using?

A. I believe they were using a Giannini po-

(Testimony of Marlan E. Bourns.)

tentiometer known by the trade name of Microtorque.

Q. Now, how was that, in accordance with your knowledge, connected in this guided missile and this instrument?

A. I believe the shaft of the Microtorque pot had a small gear, and the vane had a large gear, and the two gears operated together, so that movement of the vane caused movement of the small rotary pot.

Q. What was their difficulty or what was their problem of that use?

A. I believe, in addition to telemetering, it was my impression they were also using this device to control the actual flight of the missile, and it was very important that this device be exactly accurate, or the entire missile would not have a successful flight.

Q. Was there or was there not a problem stated to you by Consolidated Vultee with respect to this particular use of a potentiometer?

A. Consolidated personnel felt that this potentiometer arrangement was definitely troublesome in their device, and in their missile, and was one of the major causes of the failure of the missiles at that time. [33]

Q. Did they state to you that they were having failures in the missile at that time?

A. That was my impression, yes, sir.

Q. And they stated to you that one of the

(Testimony of Marlan E. Bourns.)

sources of the difficulty was the potentiometers; is that correct?

A. That was one of their main sources of difficulty, yes. In fact, it was generally known to the people in the missile field that pickups or transducers to get information about the flight of the missile, or to control the flight of the missile were the major drawbacks to the success of the missile projects at that time.

Q. Was this somewhat a secret project with Consolidated Vultee, this guided missile project?

A. I believe it was. I had top secret clearance for one project, and I believe it extended over that period of time also.

Q. I see. It was because of that top secret clearance that you were able to obtain this information; is that correct?

A. I believe that would be correct.

Q. Now, did you discuss with anyone at Consolidated Vultee any of your thought that you would endeavor to solve their problem for them?

A. I believe I may have initially indicated that I would like to go into the electronic field, and my original [34] thought was to purchase a trailer and to endeavor to install telemetering equipment on the missiles and pick up the records in this trailer, and provide the company with a complete record of the flight.

Q. Now, when this problem in the potentiometer in the guided missile was presented to you, did you indicate to Consolidated Vultee, or their engineer-



(Testimony of Marlan E. Bourns.)

ing staff, that you would endeavor to solve their problem?

A. It was apparent the device they were using was unnecessarily complex and crude, and I proceeded to have a job shop make a model instrument to my design, which I thought would be a drastic improvement on the prior device.

Q. Well, then, whether you stated to them or not that you would try to solve the problem, you set out to solve the problem; is that correct?

A. That is right.

Q. Now, in doing that, what did you do in trying to solve this problem? What did you do?

A. Well, basically, I worked out various sketches of my own, which seemed to be a more direct approach to the problem, and came up with an entirely different device, which consisted of only one moving part, and which was much more accurate and repeatable, and appeared to me to be a great improvement in solving this problem.

Q. Now, you state that you first had some job shop [35] make for you a vane type instrument according to your design. What was the name of that shop?

A. Instrument Development Company.

Q. Where was they located?

A. Pasadena.

Q. And who was employed by that company?

A. As I recall, a man by the name of Percy Scaling and Charles Edler were the two owners of the company.



(Testimony of Marlan E. Bourns.)

Q. And at that place did you contact any particular individuals who worked on this problem?

A. Primarily, Percy Scaling.

Q. Now, I place before you a device, and ask you what that is?

A. This device, except for the vane and various other minor alterations which were made subsequently was the first vane unit that was made for me by Instrument Development.

Q. Now, I would like to have you, if you can, take that cover off and explain to the court,—you say you developed a device with only one moving part. I would like to have you just explain to the court what you meant by that?

A. Does anyone have a screwdriver?

(The tool was handed to the witness.)

Mr. Lewis E. Lyon: In the meantime I will ask that this device be marked for identification as Plaintiff's Exhibit next in order. [36]

The Clerk: Plaintiff's Exhibit 7, marked for identification only.

Q. By Mr. Lyon: Now, you have removed from Exhibit 7, for identification, a portion of it. What portion of that is it? Is that the base?

A. The sheetmetal lid.

(The device referred to was marked Plaintiff's Exhibit 7, for identification.)

Q. That is the lid; all right.

A. This device consists of only one moving part, and it is counterbalanced in such a manner that the portion on one side of the bearings is equal to

(Testimony of Marlan E. Bourns.)

the moment of inertia, the portion on the other side, and one of the major problems they had was getting adequate accuracy and the figure of .05 degrees was mentioned, which is only three minutes of arc. So the reason this first device was so long was to enable me to put in a long enough element in that arc to provide the accuracy that they said was required of this instrument, in view of the size of the wiring. You can see that the wire is extremely small.

The Court: Like a hair.

The Witness: That is right.

Q. By Mr. Lewis E. Lyon: Now, will you just describe this instrument and its operation? Describe the whole instrument, and how it operates, and what it does. Let's [37] not assume that anybody has any knowledge of what a potentiometer is in any way.

A. Well, the device is mounted in a missile or airplane in such a manner that the vane protrudes outside the missile through a hole into the slip-stream, and one of the features of this unit, in order to enable that to be done, was a V-shaped device here, which permits the vane to be removed and reassembled with no misalignment. That, too, was said to be one of the major problems of the other device. It was not a satisfactory way of removing the vane and replacing it in exactly the previous manner, so that the calibration originally obtained may not be accurate.

Then, in accordance with the variation of the

(Testimony of Marlan E. Bourns.)

missile relative to the airstream, this arm moved along this resistance element, and by attaching a battery across the two end terminals of the potentiometer a varying voltage may be obtained from the wiper. This voltage is obtained off the electrical element going through this contact and hence to this other contact and hence to this plate which is tied to this center terminal.

Q. What was that variable voltage or that variation in voltage used for in this problem? What did we accomplish by it?

A. I believe it was used for one thing, for telemetering purposes, to get information about the flight of the missile, [38] and it is also my impression that it also may have been used to actually control the flight of the missile through several mechanism devices which actuated the fins and flaps of the missile, in accordance with information picked up.

The Court: What does a telemeter achieve in a guided missile?

The Witness: A telemeter is simply a radio transmitter into which the varying voltage from this device can be fed, and then this radio signal is picked up on the ground with a receiver and the output is recorded, so that any change in the flight of the missile can be later obtained by inspection of the tape.

The Court: It is in reverse order. In other words, it is a signal from the missile?

The Witness: Right.

(Testimony of Marlan E. Bourns.)

The Court: An automatic signal from the missile——

The Witness: Continuous.

The Court: ——to the ground?

The Witness: Right. And that occurs all the time the missile is in flight, to indicate all the functioning of the missile. Various things they are interested in, for instance, air pressure, and angle of yaw and angle of attack, and the movement of various control surfaces and various valves which operate the missile, and also altitude and air speeds.

Q. By Mr. Lewis E. Lyon: All right. Are those variations [39] which may be of wide range or are they variations they are trying to record of rather slight magnitude, or may they be both?

A. Well, actually, they are both, which is a part of the problem. In some cases the variations are rather great, so that the total excursion of the vane in this case needs to be rather great, but, on the other hand, it is desired to pick up rather small changes when the missile reaches a very high speed.

Mr. Lewis E. Lyon: At this time I will offer in evidence as a part of this witness' testimony the Exhibit 7, for identification, heretofore so marked, as Exhibit 7.

Mr. Pruitt: May I see it?

Mr. Lewis E. Lyon: Yes. While it is open, counsel for the defendants might like to examine it.

The Clerk: This has been offered, your Honor.

The Court: It may be received.

The Clerk: 7 in evidence.



(Testimony of Marlan E. Bourns.)

(The device, heretofore marked Plaintiff's Exhibit 7, for identification, was received in evidence.)

Q. By Mr. Lewis E. Lyon: After this Exhibit 7, this vane type potentiometer was constructed for you, what did you do with it?

A. I took the unit down to Convair, and showed them my approach to the problem of measuring the angle of yaw and [40] angle of attack.

Q. When they inspected this unit, what did they say?

A. They said it felt like a boat anchor, because it was so heavy, and it was so big that it was ridiculous in their cramped quarters, in their opinion, and I pointed out that it was only because of the extreme accuracy that they had said was required that the thing was as large as it is, and that it could be half as small if they would permit half the accuracy. [41]

Q. Well, did they ever permit half the accuracy?

A. I think they still wanted the accuracy. We endeavored to use smaller wire in the elements and compromise generally in the interest of making the size more reasonable. They also objected to the first vane as being, looking like the rudder of a boat.

Q. Well, as a result of this demonstration did Consolidated Vultee commission you to make an experimental device for them?

A. No, not as the result of this particular one. I then brought the unit back to Instrument Development and had them do considerable alteration. In



(Testimony of Marlan E. Bourns.)

the original unit, rather than the second contact and the little silver plate I had a flexible lead wire running from the moving arm to the center terminal, and it was found that that introduced far too much torque in the system, and did not permit free operation, so that was replaced.

Then mounting holes were provided by means of some plate nuts, and the vane was changed.

Q. Well, then, did you make a second instrument?

A. Well, I made modifications on the first one and then took it back to show them.

Q. And then you took the modified instrument back and did they accept that?

A. No. It was still too big. [42]

Q. Still too big?

A. Right. In the meantime I had worked out on the other ideas for making the unit smaller and easier to produce, and better generally.

Q. And did you produce the second instrument?

A. Yes, I did, I had Instrument Development make another entirely different instrument.

Q. I hand you another instrument of the vane type, which I will ask be marked Exhibit 8 for identification. And I am removing from this instrument your identification tag, Mr. Warner, which has your initials on it, being one that I believe you put your identification on sometime before, or who-soevers identification mark it was I am taking it off at the present time. And I ask that it be marked Exhibit 8 for identification.

(Testimony of Marlan E. Bourns.)

The Clerk: 8 marked for identification only.

(The exhibit referred to was marked Plaintiff's Exhibit 8 for identification.)

Q. By Mr. Lewis E. Lyon: I hand you this device Exhibit 8 for identification and ask you if you can tell me what that is, and if you will do so, please?

A. It is a model of a vane potentiometer.

Q. Well, does this have relation to this second device that you say you manufactured?

A. It isn't the second device, I don't believe, but [43] it is similar to it.

Q. It is not the second device?

A. No, it is not.

Q. Do you have the second device?

A. Yes, sir, I believe it is there.

Q. Will you go see if you can find it?

If I marked the wrong one I don't want to do that. Now, you have produced from a box a third device. I will ask that this be marked Exhibit 9 for identification.

The Clerk: 9 marked for identification only.

(The exhibit referred to was marked Plaintiff's Exhibit 9 for identification.)

Q. I hand you the device that you have produced, Exhibit 9 for identification, and I will ask you to describe this instrument the same as you did with respect to Exhibit 7, taking it apart, if necessary, to demonstrate it, although it has a transparent cover on it

A. I believe the operation can be seen fairly

(Testimony of Marlan E. Bourns.)

well through the transparent cover. This unit incorporates two ball bearings, one mounted just inside this wall and one mounted inside this wall, and to those ball bearings is affixed an arm, which has an insulating portion, and to that arm a resilient contact plate is affixed. One end of that plate rides on this plate back here, which is tied to the center contact, and these other two terminals are tied to the two ends of the [44] resistance element. The use of ball bearings was a major improvement over the first device, inasmuch as the friction was greatly reduced. And this contact was brought as near as feasible to the center of the shaft, so that friction from the second contact would be a minimum.

The aligning device was slightly altered. There is a round pin which fits into a V-shaped groove in the vane so each time the vane is installed on the instrument it would be exactly aligned, as it was before it was removed. This permits installation of the device inside the missile with the vane on the outside, without losing the calibration.

The Court: You also got rid of the boat?

The Witness: Yes, somewhat, although it is fairly large. We put tap mounting holes on all surfaces. We didn't know where they would mount it, so we put it on all sides.

Q. By Mr. Lewis E. Lyon: Was this second device, Exhibit 9 for identification, exhibited to Consolidated Vultee? A. Yes, it was.

Q. Did they accept that one?

A. No, they didn't accept this one either. How-

(Testimony of Marlan E. Bourns.)

ever, they thought it was a big improvement over the other.

Q. Did they have any specific criticism of this?

A. I don't recall any specific criticism. I think possibly the total travel of this instrument was felt to be [45] too small for their application.

Q. By "total travel" you mean what?

A. Angle of arc through which the device operates.

Q. All right. Now, as a result of this instrument did they commission you to do anything?

A. Yes, they did issue a purchase order, which requested that I produce five vane instruments, and I believe the only thing specified on the order was that they must have an accuracy of plus or minus .05 degrees.

Q. Have you that purchase order in your records here? I believe you have it.

A. I have a copy of it. I don't believe I have the original.

Q. What is it, a photostatic copy?

A. Yes.

Q. Will you produce that photostatic copy, please?

Mr. Lewis E. Lyon: I will offer the device heretofore marked for identification in evidence as Exhibit 9.

The Court: It may be received.

The Clerk: 9 in evidence.

(The exhibit referred to was marked Plaintiff's Exhibit 9, and was received in evidence.)



(Testimony of Marlan E. Bourns.)

Mr. Pruitt: I note this says "Exhibit A attached thereto"; is that available?

The Witness: Yes. [46]

Lewis E. Lyon: Yes. Let's find out what Exhibit A was, and get this all together.

Q. By Mr. Lewis E. Lyon: You have produced two sheets, in response to the interrogation, which I will ask be marked as Exhibits 10-A and -B, 10-A being the purchase order, and 10-B being that instrument stated to be Exhibit A to the purchase order. Do you have any question about these being photostatic copies?

Mr. Pruitt: I don't at present, Mr. Lyon, but I regret that I don't have my copies here to check them. May I reserve the right to correct them?

Mr. Lewis E. Lyon: Certainly.

The Court: They will be received subject to that reservation.

The Clerk: 10-A and 10-B in evidence.

(The exhibits referred to were marked Plaintiff's Exhibits 10-A and 10-B, and were received in evidence.)

[See Book of Exhibits.]

Q. By Lewis E. Lyon: I hand you Exhibits 10-A and 10-B, and ask you if these are the two devices or instruments received by you together and which constituted a purchase order, is that correct?

A. Yes.

Q. Was there any known specifications of any device to be manufactured in accordance with that purchase order? [47]



(Testimony of Marlan E. Bourns.)

A. No, there wasn't. In fact, when the purchasing department of Convair first called on the phone, I recall that he asked what our terms of sale were, and I said, "Well, I don't know what you mean by terms of sale." He said, "Do you give one per cent in 10 days, or what?"

I said, "What do the other folks do?"

"Most of them give one per cent in 10 days."

So I said, "Okay, we will do that, too."

Q. You had exhibited these particular devices to Consolidated Vultee, that is Exhibit 7 and Exhibit 9. State whether or not this was in the nature of an experimental purchase order, I mean this Exhibit 10-A and 10-B?

A. I would think that it was, yes.

Q. The only thing that was specified by Consolidated Vultee is the degree of accuracy of the ultimate instrument, isn't that correct?

A. Yes, I notice it also specified the total resistance, which is 2,000 ohms.

Q. Then they specified that they wanted an instrument which had a capacity of 2,000 ohms with an accuracy of .05 degrees, is that correct?

A. That is all that was on the order.

Q. And that is all that was known, wasn't it?

A. Yes.

Q. I notice a price extended here of \$225 each for [48] these devices, and that there were to be five of them. Isn't that a rather exorbitant price for a device like Exhibit 9, for example.

A. Well, it certainly is rather expensive. How-

(Testimony of Marlan E. Bourns.)

ever, I think since a missile is worth, I understand, in the neighborhood of \$100,000, the expenditure of \$200, if it will solve the problem, is relatively minor by comparison.

Q. Does or does not that price extension indicate that this was more or less of an experimental order, rather than for the purchase of a definite device?

A. I believe the price was set by me as one that would be sufficient to cover the experimentation and engineering and production that would be involved in making the five experimental units.

Q. All right. Now, did you, in accordance with this Consolidated Vultee order, Exhibit 10-A and 10-B, produce these instruments called for?

A. Yes, we did.

Q. Have you the instrument that you so produced, or a sample of it?

A. It was similar to the one which you have already introduced, but that may not be one of the first five.

Q. Do you mean 8 for identification?

A. I believe it was similar to that.

Q. Similar to Exhibit 8 for identification. I will [49] hand you Exhibit 8 for identification and ask you if that is what you referred to?

A. I should clarify that we used bakelite lids on the production units, inasmuch as this lucite will not stand the 200 degree temperature which is required of all missile components. This was strictly

(Testimony of Marlan E. Bourns.)

for demonstration on this unit and on this one (indicating).

Q. Now you are talking about Exhibit 8. You say the ones that you produced in accordance with this order Exhibit 10-A and 10-B were similar to but not identical with Exhibit 8, is that correct?

A. Yes, I believe so.

Q. Will you point out where there was any difference between the ones that you delivered in accordance with Exhibit 10-A and Exhibit 8?

A. One main difference was the stops in this earlier device were little round eccentric——

Q. No, I don't mean that. You say the ones you delivered to Convair, and in accordance with Exhibit 10-A, were similar to but not identical with Exhibit 8 for identification, we want to know how the ones that were delivered differed from Exhibit 8, not how they differed from Exhibit 9.

A. Well, bakelite lid that I already mentioned was one difference.

Q. Was there any others? [50]

A. I think the first unit—I believe on the first ones we used a brass arm, and a bakelite insulating block attached to the arm, and this one has an all bakelite arm, as far as I can see, so that would be one of the differences. Also, this has a little different counterbalance arrangement, I believe, than we first used. I am not sure whether the travel of this unit is the same or not.

Q. Well, generally Exhibit 8 for identification is illustrative of the first structure that you made

(Testimony of Marlan E. Bourns.)

on the experimental order, except for the minor differences that you pointed out, is that correct?

A. Yes, that is right.

Q. All right. Now, when was that delivery made?

A. On February 25, 1947.

Q. Those instruments were subsequently paid for, were they?

A. Yes, I think about a month or so later.

It seemed longer than that at that time.

Q. They were accepted, then?

A. We never got them back. I guess they finally did something with them.

Q. All right. Now, during this period of time of the making of this rotary type potentiometer, this vane type, was there any other problem that was expressed to you by Consolidated Vultee in this same field, which you also sought [51] to solve?

A. Yes, there was. They mentioned that another of their problems was determining the position of some of the fins on the missile, and also the position of various actuating hydraulic piston devices, and they said that at that time the only means they had of determining the position of these devices, either for telemetering or for control purposes was the use of a very crude arrangement, which consisted of a rotary potentiometer, probably of the radio volume control variety, to which a string or small wire was attached around the shaft or a pulley on the shaft, and this string then was pulled by the linear movement of the device they were

(Testimony of Marlan E. Bourns.)

interested in measuring and was pulled in the reverse direction by some type of coil spring or screen door spring; and obviously that sort of an arrangement is extremely crude, it was felt by them to be most unsatisfactory.

Q. And did you undertake to solve that problem for them?

A. Yes, I did. I felt that a direct approach to that problem would be to provide a potentiometer which moved in a straight line instead of in a rotary manner, such as the radio volume controls do.

Mr. Lewis E. Lyon: I will ask that this device heretofore marked for identification as Exhibit 8, be received in evidence as Exhibit 8. [52]

The Court: All right. It may be received.

(The exhibit referred to was marked Plaintiff's Exhibit 8, and was received in evidence.)  
\* \* \* \* \* [53]

Q. By Mr. Lewis E. Lyon: I believe before the noon recess we started to discuss the linear pot development? A. Yes.

Q. And you had testified to the fact that you became acquainted with the problem at Convair; is that true? [54] A. I believe so, yes.

Q. And what did you do in trying to solve that problem, Mr. Bourns?

A. Well, I proceeded to draw up various sketches of possible constructions of instruments which would be a more direct approach to the problem, and would be more reliable and accurate than



(Testimony of Marlan E. Bourns.)

the roundabout method that was previously used.

Q. Did you submit your ideas on that problem to Convair?

A. I believe prior to going over any of my ideas with Convair, I had Instrument Development Company make an instrument embodying my ideas, and then showing the instrument to Convair.

Q. Do you have that instrument?

A. I believe it is here. I think it is in evidence.

Q. One that I used this morning?

A. Right. That is it.

Q. This Exhibit 6, is that the one you are speaking of?

A. Yes, I believe that's it, yes.

Q. Now, I am going to ask you to describe that structure, and its purpose, and use, and I am going to give you the tools, so that if necessary you can take it apart.

A. Well, the purpose of this instrument was to connect the shaft, which reciprocates relative to the body, to any device which moves back and forth in a straight line. [55]

Q. Now, what you call the shaft is the piece that projects from one end of the plastic body; is that correct?

A. From one end of the body. The body is not all plastic.

Q. I see.

A. A further part of this device which was made was a little hinge arrangement, which permitted this unit not only to follow a straight line motion,

(Testimony of Marlan E. Bourns.)

but a motion in the form of an arc, inasmuch as the hinge permitted this entire instrument to pivot. Basically, the instrument has a shaft and post and contacts in a base portion, and then in the lid portion it has a return, an electrical return, connected to one terminal, and an electrical element connected to two other terminals, and the contacts bridge there between those devices.

Q. I think it would be well, Mr. Bourns, if you would take that lid off of that——

A. All right.

Q. ——and show what you mean by these different parallel electrical elements that are in the lid of this structure, because it is not apparent to me from your testimony.

(The witness does as requested.)

A. The lid has a wire-wound electrical element running longitudinally, and parallel to it is an electrical conducting bar. This is the electrical element which is wound with [56] wire, about the size of a human hair, and this is a silver-plated bar in this instance, and then this bridging contact, which is supported by the post and shaft assembly for rectilinear movement bridges between this element, and this collector strip of that contact is made to the center terminal and to any portion of the electrical element on which this electrical contact is resting.

The Court: When an electric current goes through, what does this instrument do to it?

The Witness: Well, the use, again, in general, is to connect a voltage across the two outer term-

(Testimony of Marlan E. Bourns.)

inals of the potentiometer, and then in accordance with the position of the shaft, a proportionate voltage can be picked off. In other words, say if five volts are placed across it, and the shaft is approximately one-fifth of the way from one end, then one volt would appear, if you moved it further it would be two volts, and so on. And the accuracy which is desired of an instrument of this type is the order of one-thousandth of an inch.

The Court: So it would be a very sensitive instrument?

The Witness: Extremely so.

The Court: Not likely to lose any of the power?

The Witness: Yes, sir, that is correct.

It is important, too, that the unit be capable of withstanding high speed operation and long life. Typical current requirements, present requirements, for instance, involve operating speeds of 200 cycles per second, which is extremely fast movement, and at the same time a traversing of the entire element, and during all that time no noise whatever is permitted, or by "noise" we mean any discontinuity of the electrical circuit.

Our customers normally reject instruments which exhibit [58] even one bit of discontinuity or noise during tests of that type. And the repeatability has to be extremely accurate, too, so that on returning the shaft to a definite position the same electrical reading is always obtained.

Q. By Mr. Lewis E. Lyon: Now, you spoke about a hinge arrangement that you made in con-

(Testimony of Marlan E. Bourns.)

nection with this original model. I hand you a device; is that the hinge arrangement?

A. That is right, that is the hinge.

\* \* \* \* \*

Q. By Mr. Lewis E. Lyon: We were speaking, I believe, about you said you had had a hinge mounting for Exhibit 6, the first linear motion potentiometer. I believe I had just asked you whether this was the hinge mounting to which you referred.

A. Yes, sir, that is the hinge mounting. This back plate of this model is made so that it could be removed, and [59] this other plate installed in its stead. And that permits the entire instrument, then, to follow the movement of something which is moving in an arc, rather than in a straight line, by permitting the instrument to swivel about the hinge.

Mr. Lewis E. Lyon: I will ask that this hinge mounting be marked and received in evidence as Exhibit 6-A.

The Court: It may be received.

The Clerk: 6-A in evidence.

(The exhibit referred to was marked Plaintiff's Exhibit 6-A, and was received in evidence.)

Q. By Mr. Lewis E. Lyon: I note in this model 6 that the shaft which you have called the shaft which projects from one end of the potentiometer is a round shaft, but it is not capable of being turned with reference to the instrument; is that true?



(Testimony of Marlan E. Bourns.)

A. Yes, sir; that is true in this model.

Q. Did you develop or design other types of shaft construction for linear motion potentiometers?

A. Yes, we did. There are in general three different or four different constructions which we use or have used at some time. One is a round shaft, which is free to rotate relative to the post and contact portion of the assembly; another is a square or rectangular shaft, which is not free to rotate; and this arrangement is a round shaft which is not free to rotate; still another arrangement is that of a side shaft, rather than an end shaft.

Q. All right. Now, do we have exemplars of those different structures here, Mr. Bourns? I believe we have a square shaft.

A. The square shaft is already in evidence, I believe. [61]

Q. Yes. We have the square shaft in Exhibit 4; is that correct?

A. Yes, that is right.

Q. Now, taking that square shaft device, take it apart and show us what the difference in structural relationship of the post, the pressure plate, and the shaft is in that structure as compared with the assembly of the post, the shaft and the pressure plate in the round shaft structure?

The Court: I think it might be a good idea, if we are going to do this here, to put a blotter paper there before the witness, because these might roll off, Mr. Clerk.



(Testimony of Marlan E. Bourns.)

The Witness: I have it apart now.

The Court: That is all right. Just put a blotter down there. Otherwise they are likely to run away from there.

Mr. Lewis E. Lyon: Yes, so the screws don't roll off.

The Court: Yes. Screws have a way of disappearing.

Q. By Mr. Lewis E. Lyon: Now, will you proceed with your explanation of what the model is?

Mr. Pruitt: Is this Exhibit 4

Mr. Lewis E. Lyon: This is Exhibit 4.

The Witness: This device, much like the other, has a shaft——

The Court: Let's identify this. Is this one of the embodiments of the invention?

Mr. Lewis E. Lyon: Yes. [62]

Mr. Pruitt: It is so claimed by plaintiff, your Honor.

The Court: All right. We will be non-committal. We do not admit anything; at least, not today. Maybe next week we will, but not the first day.

The Witness: In this particular embodiment a square shaft was used for two reasons: one was for ease of machining, and ease of assembly. Another reason was to prevent the shaft from turning, and hence prevent the contact assembly from turning. You will note there is clearance in this particular model between the sides of this little slot, and this little device which we call a post.

By the way, it might be of interest where we

(Testimony of Marlan E. Bourns.)

got the name "post." Some of the fellows in the shop thought it looked like a post, and for lack of a better term it has been called a post, and has been called that ever since.

Q. By Mr. Lewis E. Lyon: The pressure contact plate on top of what you have just defined as a post has two contact elements, has it not?

A. Yes, that is right. These spring fingers.

Q. And those, between the two contact elements, are carried in a cover?

A. Yes, that is the same as the other. Here is the wire-wound resistance member, and an electrical return strip tied to the center terminal.

Q. Take Exhibit 4. Where was Exhibit 4 manufactured? [63]

A. This was manufactured by the D. B. Millikan Company.

Q. Who is the D. B. Millikan Company?

A. Who are they, you say?

Q. Yes.

A. It was an organization in Altadena operated by a man by the name of D. B. Millikan and Frank Gobel.

Q. You say this structure was made there. Was there any particular machinist or individual there who did this work for you?

A. I believe that Ed Pitzer did a great amount of the work.

Q. You mean Mr. Pitzer of the defendant organization?

A. Yes, that is correct.

(Testimony of Marlan E. Bourns.)

Q. Now then, Exhibit 4 was made at the Millikan Company; is that correct?      A. That is.

Q. When?

A. In the early part of 1947, I would say.

Q. Now, prior to the manufacture of this structure with a square shaft at the D. B. Millikan Company, had you known of square shaft developments?

A. I believe some of our early drawings made either by me or by Percy Scaling of the Instrument Development Company indicated a rectangular shaft as one possible embodiment of linear motion potentiometers. [64]

Q. And when were those drawings made with reference to the time that you first went to the Millikan Company?

A. I believe they were made before.

Q. Was that before you had met Ed Pitzer?

A. Oh, yes.

Q. Now, you have testified as to two forms of this structure, that is, the square shaft, and the round shaft, which is non-rotatable, and stated there was a third form of shaft in which the shaft was rotatable. I don't know whether you will accept this as a model that you want to use as a rotatable shaft, but here is one, and just define that as to the relationship of the three parts, the shaft, the post, and the contact plates.

Mr. Pruitt: Is that an exhibit, Mr. Lyon?

Mr. Lewis E. Lyon: No. I will ask that the model I have just handed the witness at the present

(Testimony of Marlan E. Bourns.)

time be marked for identification as Exhibit No.—

The Clerk: 11.

Mr. Lewis E. Lyon: —11.

The Clerk: So marked for identification.

(The model referred to was marked Plaintiff's Exhibit 11, for identification.)

The Witness: We are lacking some insides in this one.

Q. By Mr. Lewis E. Lyon: There are no insides in that one? [65]

A. Oh, there are on the other side. Some, not all.

Q. Maybe you had better get a complete instrument from down below, then, and we will substitute it. A. If we can find one.

Mr. Pruitt: Now, which is 11? Are we to substitute this for the other exhibit as Plaintiff's Exhibit 11?

Mr. Lewis E. Lyon: That is perfectly satisfactory to me, or if it will serve to keep the record any clearer, we will mark this one.

Mr. Pruitt: Either way you want to do it.

Mr. Lewis E. Lyon: Let's see if this one is complete on opening it before we make a substitution.

The Witness: Yes, it seems to be.

Mr. Lewis E. Lyon: All right. Then we will substitute the one you now have, and let's keep these screws separate, whichever ones belong to which.

Let's have the clerk mark this, or put a tag on it, so we will know which one we are talking about.

(Testimony of Marlan E. Bourns.)

Q. By Mr. Lewis E. Lyon: All right. Now, will you explain Exhibit 11, for identification, and how it differs in this assembly of the shaft, post and pressure plate?

A. This instrument has a rotating shaft, whereas the previous instrument with round shaft and square shaft did not have a rotating shaft.

It became apparent that it would be advantageous to have [66] a shaft which rotated, because we found that customers sometimes tried to force the round shaft to turn, and damaged the insides, and also it was apparent that it was merely necessary to guide the contacts relative to the wire-wound element and the electrical return, and that it was immaterial whether the shaft turned or not. And for that reason in this particular embodiment the shaft was made to rotate, and the post in this instance served the function of supporting the contacts for engagement with the electrical element and the electrical return.

Q. Again, in this case you had the pressure plate carried by the post with the two contact elements to engage the two electrical elements in the lid; is that correct?

A. Yes, that is right. I might mention one other point. This particular instrument is of a different color, and the reason is that it is for high temperature operation. This is a glass silicon lid, and different construction for that reason.

Mr. Lewis E. Lyon: I will ask that the instrument just explained by the witness, and heretofore



(Testimony of Marlan E. Bourns.)

marked as Exhibit 11, for identification, be received in evidence as Exhibit 11.

Mr. Pruitt: Will you establish a date on the manufacture of that? I think it is immaterial, unless it was manufactured at some time when——

Mr. Lewis E. Lyon: I will be glad to do that.

Q. By Mr. Lewis E. Lyon: When was this type of rotatable shaft instrument developed, Mr. Bourns?

A. Let's see. You are referring now to a type rather than this specific instrument?

Q. Yes. This is an example of the type, as I understood it.

A. I am not sure that I can recall with much certainty. I would estimate that it was possibly in the early part of 1950. [68]

Q. Early part of 1950. All right. Where?

A. In our plant.

Q. Now, you have stated that there was a fourth type——

The Clerk: This is still unadmitted. Your Honor, is it admitted?

The Court: It may be received.

The Clerk: 11 in evidence.

(The exhibit referred to was marked Plaintiff's Exhibit 11 and was received in evidence.)

Q. By Mr. Lewis E. Lyon: Now, you have testified that there was a fourth type or a side shaft type, I believe you called it, of an instrument developed, and I will hand you what I take to be an exemplar of that type and ask you if

(Testimony of Marlan E. Bourns.)

that is an instrument exemplar of that type of structure?

A. Yes, sir, this is an example of that type.

Mr. Lewis E. Lyon: I will ask that this instrument be marked as Exhibit 12 for identification.

Mr. Pruitt: It appears to be the same as Plaintiff's Exhibit 5, Mr. Lyon. Correct me if I am wrong.

Mr. Lewis E. Lyon: Well, is it? If it is, there is no use of putting two of them in. I guess it is.

Let the record show that what I asked to be marked as Exhibit 12 for identification is the same instrument or is the same as Exhibit 5 heretofore admitted in evidence.

Q By Mr. Lewis E. Lyon: I will ask you, Mr. Bourns, [69] to take this structure apart and explain its differences in the assembly of shaft, post, and contact plate to the court.

A. It became evident that there were two possible drawbacks to the end shaft type of instrument which we have been looking at. One of the drawbacks is that it is necessary for the total length of the extended shaft, plus the instrument itself, to be considerably in excess of twice the mechanical travel that is desired, and often there is a space problem in that connection.

Furthermore, except for the units which have hinged mounting there may be a problem of aligning the actuating device with suitable precision to the alignment of the shaft so that no binds are in-

(Testimony of Marlan E. Bourns.)

troduced, and so that the instrument or the actuating device is not damaged or excessively worn.

For both of those reasons we developed the side shaft type linear motion potentiometer wherein the shaft comes out a slot in the side rather than through a hole in the end.

Q. You are speaking, then, of Exhibit 5?

A. That is correct.

In this Exhibit 5 the shaft comes through the slot in the side and is attached to the post which carries the contacts for engagement with an electrical element and a shorting strip or an electrical return, both of which are mounted side by side in the lid and connected to suitable terminals. [70]

Q. When was this type developed, Exhibit 5?

A. Again, I am not certain of the exact date, but I would estimate it to be in the early part of 1950.

Q. Now, Mr. Bourns, I am going to place before you Exhibit 3, copy of Exhibit 3, and ask you if you will point out from Exhibit 3, if you can, the drawings which correspond to these different exhibits that you have just identified of the four types of structures, if they are all illustrated in Exhibit 3, starting with Exhibit 5 here.

A. Which one is 5?

Q. Model 114-1.

Mr. Pruitt: I take it the purpose of this testimony is merely to identify the corresponding illustration with the exhibit, and not to get this witness's conclusion as to whether or not it is an accurate drawing of the instrument itself?

(Testimony of Marlan E. Bourns.)

The Court: Well, a witness of this man's experience, a physicist, could give his opinion whether a drawing correctly is to scale and correctly represents a certain object.

Mr. Pruitt: I agree, your Honor, that he could testify as to scale and general representation. But whether or not it is an accurate drawing of the instrument itself would seem to be shown by the drawing itself, and it would be a conclusion of the witness to state.

The Court: Not unless it is a photograph. Supposing [71] it were a photograph, you could ask a person whether it correctly represents what he saw.

A man who is taught to read blueprints, you can show him a blueprint and ask him if that is a correct representation of a structure, whether it is a house or a dog house, or a mechanical device.

Mr. Lewis E. Lyon: I think the witness as the designer of these things, your Honor, can correctly state whether these drawings are correctly illustrative of the structures.

The Court: You know, up to a certain stage I am willing to be guided by experts. After that I use my own judgment.

Mr. Lewis E. Lyon: I know that. [72]

\* \* \* \* \*

Q. By Mr. Lewis E. Lyon: Now, starting with Exhibit 4—I believe we had started with 5, so let's stick with 5.

A. Exhibit 5 is shown in basic principle by plate 10. However, here is one noticeable difference.

(Testimony of Marlan E. Bourns.)

Plate 10 shows an instrument with a rectangular cross section post, whereas the instrument I have here has the round cross section post. At one time or another we have made quantities of instruments of both shapes of posts. Also, the drawings do not depict all of the various parts, such as the lead wires running to the terminals, and the like.

Q. You are referring to plate 10 of Exhibit 3 and to the post. That part is numbered on plate 10 of Exhibit 3 as what number? A. No. 66.

Q. And that is what you refer to as the post? A. Yes.

Q. Now, the shaft is numbered in that drawing plate 10 as what? A. No. 64.

Q. And the pressure contact plate is numbered what? A. No. 67.

Q. And your electrical elements which are in the lid, there being two of them, and parallel, how are they numbered?

A. The electrical element is 73 and electrical return is 74.

Q. Now, similarly taking Exhibit 4 do you find in Exhibit 3 a drawing illustrative of that model?

A. Actually the plate 1 which shows the drawing taken from our patent 2,515,981 is very similar to this unit with two or three exceptions, and I believe it was from this particular model that the drawing was made in part.

The two exceptions that are most noticeable are the fact that the plate 1 shows a lid which has end portions integral therewith.



(Testimony of Marlan E. Bourns.)

Q. That lid is colored and numbered in plate 1, is it, as what? A. No. 72.

Q. And what is the color?

A. The color is yellow.

Q. And the entire yellow section, then, is the lid in plate 1? A. That is correct.

Q. While in Exhibit 4 the lid is the black plastic structure, is it?

A. Yes, sir, that's right. The reason for this particular embodiment of this model was so that the horizontal milling cutter could be used to make the longitudinal slots in which the element and the electrical shorting strip were mounted, and the plates made integral with the body portion were for the purpose of covering up the cuts which would otherwise come out through the end.

Q. Is there any other difference between plate 1 and Exhibit 4?

A. Yes, sir, one of the other differences is that plate 1 shows a round shaft No. 64, which is colored blue, whereas the model that I have, Exhibit 4, has a square shaft. Otherwise they are generally very similar.

Q. Was that model of structure as shown by plate 1 made in both this round and square shaft, then?

A. Well, yes, the basic principle shown by plate 1 applies to both instruments.

Q. Now, taking Exhibit 6, do you find an illustration of that model in Exhibit 3?

A. There are two possible illustrations which

(Testimony of Marlan E. Bourns.)

are similar to this, but neither of which are identical to it. [76] Plate 1 previously referred to is very similar with the exception, again, that the model, Exhibit 6, has end plates covering the ends of the lid, whereas the plate 1 has end portions integral with the lid, and also the pivoted mounting device shown in plate 1 is not present on this model, although the same thing was accomplished by Exhibit 6-A, I believe, which has been introduced separately, but which is not attached to the model at this time.

The Court: In making up this book, you tried as nearly as possible to give the same number to similar elements?

Mr. Lewis E. Lyon: Yes, your Honor, the same numbers are given to similar elements throughout the book, and those numbers are the numbers that are taken from the face of the patent.

The Court: All right.

Mr. Lewis E. Lyon. In fact, they are the number of figure 6——

The Court: That is all right. I have it here. Figure 6 of patent '981.

Mr. Lewis E. Lyon: Yes, they are figures 6, 7, 8 and 9 of both patents, both patents having the same drawings.

The Court: All right.

The Witness: The other plate which bears a similarity to Exhibit 6 is plate 7. However, this particular instrument or model 108 was made considerably after this time—— [77]

(Testimony of Marlan E. Bourns.)

Q. After which time?

A. At the time that Exhibit 6 was made. And at the time Model 108 was made it was desired to drastically reduce the size of the instrument, so that this instrument is much smaller and has a few other dissimilarities.

Q. Now, you mean the instrument of plate 7 is much smaller than Exhibit 6? A. Yes.

Q. But as is drawn on plate 7 it is larger. How do you account for that difference? If I was——

A. These drawings are not to any specific scale relative to the models, but merely to a scale which is consistent within the one plate, as I understand it. [78]

Q. I see. This scale of the drawing, then, of Plate 7 is, in effect, to magnify the actual structure; is that right?

A. Yes, that is correct. It is about twice; double scale.

Q. I see. Now, I believe there is one other model, and that is Exhibit 11. Now, is there a drawing illustrative of Exhibit 11 in Exhibit 3?

A. I believe Plate 21 would be the most similar. That is Model 109, and the difference between the Model 109 shown by Plate 21, and the Model 110 which appears on the face of Exhibit 11 was primarily to designate the fact that Exhibit 11 is for high temperature applications. And otherwise they are basically the same principle.

Q. Otherwise, except for the type of material

(Testimony of Marlan E. Bourns.)

used and for the color, Model 110 is the same as Plate 21 of Exhibit 3; is that correct?

A. Well, with certain minor exceptions, such as the lead wires, and such as the particular shorting strip shown. Plate 21 shows a round wire with the ends embedded in two holes, whereas this particular instrument may not. I am not sure actually. I don't have the lid off at this time.

Q. You don't know whether that is a difference or not, then? A. That is right. [79]

Q. All right. Put the cover back on, then. That is a matter of comparison, is it not?

A. Yes.

Q. All right. Now, you have testified that as to these different types of shaft, post, and pressure plate assembly there were certain sketches or drawings made, and made at a particular time. Have you any of those sketches or drawings?

A. I believe those drawings were kept in the Instrument Development Company file, and I believe that we do have most of those drawings here.

Q. Where are those drawings? Will you get them, Mr. Bourns? A. All right.

(The witness did as requested.)

Mr. Lewis E. Lyon: Incidentally, this file of the Instrument Development Company constitutes a portion of the material demanded on the subpoena duces tecum which was served on us yesterday at 11:00 o'clock, and this much of that material has been assembled at the present time.

Q. By Mr. Lewis E. Lyon: Now, can you find



(Testimony of Marlan E. Bourns.)

from this file where those sketches are that you referred to, Mr. Bourns?

A. Relating to which model, now, the linear motion type or the vane type?

Q. We have four different types of post, shaft, and [80] pressure plate. Some of those sketches you stated were in this file. Now, which ones are there?

A. Here is a sketch which shows a generally rectangular actuating bar.

Mr. Lewis E. Lyon: Now, this sketch which you have just produced from this file I will ask be marked Exhibit 12-A, for identification.

(The sketch referred to was marked Plaintiff's Exhibit 12-A, for identification.)

The Witness: And here is another sketch, which is dated December 17, 1946.

Mr. Lewis E. Lyon: I will ask that this sketch be marked Exhibit 12-B, for identification.

(The sketch referred to was marked Plaintiff's Exhibit 12-B, for identification.)

The Witness: That shows a unit remarkably similar to our model 108, as we now make it.

Q. By Mr. Lewis E. Lyon: That is 12-B, you are speaking of now?

A. Yes. There are several different sketches which show various general unit embodiments. Here are two such sketches.

Mr. Lewis E. Lyon: These two sketches that you have collected out of this file, which you say refer to vane type units, I will ask be marked Exhibits



(Testimony of Marlan E. Bourns.)

12-C and 12-D. I don't [81] believe you referred to them in any particular order, did you?

The Witness: No.

Mr. Lewis E. Lyon: 12-C for this one, and the next one 12-D.

(The sketches referred to were marked Plaintiff's Exhibits 12-C, and 12-D, for identification.)

Q. By Mr. Lewis E. Lyon: Now, have you other sketches in here that you desire to refer to at the present time?

A. Yes, I believe there are.

Q. All right. Just proceed and find them.

A. Did you want me to include those sketches which were made by Instrument Development by way of parts drawings for the making of some of the first samples?

Q. If they refer to this particular subject-matter of the four different types of pressure plate, post, and shaft assembly, yes.

A. Here are two drawings which show embodiments of vane type units, and this one shows various terminal means. One of our problems at the early stage was what type of terminal means to use, whether solder lug, studs, or screw type, or what-have-you. This shows various vane constructions.

Mr. Lewis E. Lyon: I will take the three drawings or sketches which you have now produced, and ask that they be [82] marked serially as Exhibits 12-E, 12-F, and 12-G.

(Testimony of Marlan E. Bourns.)

(The drawings referred to were marked Plaintiff's Exhibits 12-E, 12-F, and 12-G, for identification.)

The Witness: Here is a sketch that has an assortment of various sketches and also various written comments which were made by me. In fact, it has comments on both sides relative to various features and changes and improvements.

Mr. Lewis E. Lyon: I notice that many of these drawings or sketches that you have produced, and which have been marked, contain material on both sides. It was my intention in having them marked to refer to both sides.

I will ask that this further sketch which you have now produced be marked Exhibit 12-H, and I am including in that offer both sides.

(The sketch referred to was marked Plaintiff's Exhibit 12-H, for identification.)

The Witness: Here are two other sketches, which generally indicate the construction of the very first unit. There are alternate possibilities of various of the components.

Mr. Pruitt: Of the vane type, also?

The Witness: Yes, that is the vane type.

Mr. Lewis E. Lyon: I will ask that these sketches just identified by the witness, and, again, we include in one case both sides of the page, be marked as Exhibits 12-I and 12-J.

Q. By Mr. Lewis E. Lyon: Are there any further ones [83] that you locate at the present time?

(Testimony of Marlan E. Bourns.)

(The sketches referred to were marked Plaintiff's Exhibit 12-I and 12-J, for identification.)

A. Here is a set of drawings made for me by Instrument Development Company, which served as the parts drawings, which were for the purpose of making the first linear motion potentiometer.

Mr. Lewis E. Lyon: I will ask that this set of drawings be marked separately as Exhibit 13-A, -B, -C, -D, -E, and -F, as such drawings have been produced by the witness.

(The drawings referred to were marked Plaintiff's Exhibits 13-A, 13-B, 13-C, 13-D, 13-E, and 13-F, for identification.)

The Witness: There are several other drawings here which are illustrative of various other features and means of construction, but they would be generally similar to those already present.

Q. By Mr. Lewis E. Lyon: I notice, Mr. Bourns, that this material which you have produced is in three folders. Where did you obtain these three folders?

A. I obtained these three folders about two to three weeks ago from Instrument Development Company, where they have been kept ever since my last contact with that company, which was a matter of six or seven years ago.

Q. Well, let's see if we can fix more definitely just [84] when that last contact with Instrument Development Company was six or seven years ago. Can you fix a date any more definitely?

(Testimony of Marlan E. Bourns.)

A. They did work for me from time to time during 1947, as I recall, making in one instance the vane portion of the vane potentiometer, and various other parts. I believe I have not had any work done by them since the last of 1947, as best I can recall, and, generally speaking, they did very little work for me after they fabricated the parts for the first five vane units which were previously mentioned.

Q. And those are the first five vane units that were ordered by Convair on the first order, Exhibit 10-A and 10-B; is that correct? A. Yes.

Q. All right. Now, how did you come to obtain these three files of this material two or three weeks ago? Did they call you, or did you call them?

A. No, I called them.

Q. Did you learn at that time as to whether or not there had been any requests for this material from anyone else?

A. Yes, there had, and, in fact, this material was not present at their plant at that time, but was in the possession of one of the defendants—I am sorry—one of the attorneys for the defendants.

Q. I see. Did they then request its return from the attorneys for the defendants?

A. Yes, they did several times, and in order to finally get it, they set a definite deadline date.

Mr. Pruitt: I object to that. I don't see how the witness could know that.

I will stipulate that the attorneys for the defendants had access to these drawings, that they are

(Testimony of Marlan E. Bourns.)

the same ones that were in the possession of Mr. Skaling. I think this line of questioning is absolutely immaterial. As I say, Mr. Bourns has no way of knowing how many times Mr. Skaling had called the attorneys for the defendants.

Mr. Lewis E. Lyon: I am not interested in the number of times. All I am trying to establish is that these papers were in the hands of the defendants' attorneys, and I will accept the stipulation.

The Court: All right.

Q. By Mr. Lewis E. Lyon: Now, Mr. Bourns, we have identified quite a number of drawings here, many of which I find are undated, and which relate to both the vane type and linear potentiometer. Have you any way of fixing a date upon which these drawings or sketches were made? Taking, for example, the drawing Exhibit 12-A, do you know when that was developed, with reference to any particular date?

A. I believe this drawing would have been made probably [86] by Mr. Skaling—it doesn't appear to be my drawing—probably in December of 1946, inasmuch as I contacted him relative to making a linear motion potentiometer at that time, and he and I sketched up various constructions which seemed to be good possibilities.

Q. How do you account for the fact that this particular drawing or sketch is apparently one made by Mr. Skaling?

A. Well, quite a few of them actually are made by Mr. Skaling.



(Testimony of Marlan E. Bourns.)

Q. Were you present when these sketches were made?

A. In some cases, yes. Generally, when the sketches were made I was present, inasmuch as we were going over possible constructions for the instruments. Then in the case of some of the more detailed sketches for the actual making of the parts, he probably did that on his own, following the outline for assembly sketches which had previously been made.

Q. Now, will you place Exhibits 13-A to -F, inclusive, as the latter more comprehensive type of sketches, not made when you were present?

A. I am sorry. I am confused by that number.

Q. Exhibit 13. Here is 13-A to -F.

A. Oh, yes, that is correct. These were sketches made by, I believe, Mr. Skaling to give to their shop for fabrication of the parts.

Q. Now, those exhibits 13-A to -F, inclusive, then, as [87] I understand it, are the type of sketches which were not made during your presence?

A. Generally not. I wouldn't stay there during the making of the parts sketches, but was generally present during the designing of any of the portions as shown by assembly sketches.

Q. All right.

A. Here are some additional sketches, by the way, which relate to the first vane unit and show parts sketches for the various parts therein.

Q. These are what you call a parts or shop parts

(Testimony of Marlan E. Bourns.)

sketch, which were made for the vane type potentiometer; is that right?

A. Yes, for the first unit.

Mr. Lewis E. Lyon: I will ask that these sketches be marked as Exhibit 14-A, -B, -C, -D, -E, -F, -G, and -H, respectively.

(The sketches referred to were marked Plaintiff's Exhibits 14-A, 14-B, 14-C, 14-D, 14-E, 14-F, 14-G, and 14-H, for identification.)

Q. By Mr. Lewis E. Lyon: You have another piece of paper you have produced from one of these files. What is this?

A. This is said to be linear motion potentiometer suggestions. The abbreviation is L.M.P. [88]

Q. What does L.M.P. mean?

A. That is the abbreviation we often use in our plant for linear motion potentiometer.

Q. In whose writing are those?

A. These are in my writing.

Q. In your writing?

A. Yes. They are various suggestions of changes or improvements which should be made in order to make the instrument usable and salable.

Q. Do you know when this particular paper was prepared by you?

A. Probably after the completion of the first linear motion potentiometer sample.

Q. And when was that?

A. Let's see. I believe that was delivered to me—the parts were delivered to me in the middle of December of 1946.

(Testimony of Marlan E. Bourns.)

Mr. Lewis E. Lyon: All right. I will ask that this paper entitled "L.M.P. Suggestions" be marked Exhibit 15, for identification.

The Court: It may be so marked.

(The document referred to was marked Plaintiff's Exhibit 15, for identification.)

Q By Mr. Lewis E. Lyon: Now, I am going to have to go back over these drawings, Mr. Bourns, and see if we can [89] establish in each case the date that these drawings were made, and I will ask you to take each one in chronological order. That is Exhibits 12-B to 12-J, inclusive, and tell me when each of those drawings was made.

A. Does that have to be in chronological sequence, or any sequence now?

The Court: If you can, it would help to show the evolvment of the idea.

The Witness: I see. I believe possibly Exhibit 12-J was one of the first sketches made of a vane potentiometer, and 12-I was probably somewhat subsequent to that time.

Q. By Mr. Lewis E. Lyon: All right. Now, what time is that?

A. I believe it would be in the latter part of November, of 1946. In fact, I believe one of the work orders of Instrument Development indicates the date of a sketch in mentioning what they were to make. Perhaps I can find that.

Q. I wish you would, if it is there. While you are doing that, you might tell me who made or who

(Testimony of Marlan E. Bourns.)

drew both Exhibits 12-I and 12-J, to which you have just referred.

A. Let's see. 12-I and 12-J were both drawn by me, and the date appears on Instrument Development Company's order No. 1131, wherein they write up their shop order "for the manufacture of one special vane potentiometer according to sketch of November 26, 1946, and our own detailed sketches," [90] so it would appear that my sketch was made on or about November, 1946.

Mr. Lewis E. Lyon. Now, you have drawn from the files this shop work order, and have read from that shop work order, and I will ask that this shop work order be received in evidence as Plaintiff's Exhibit 16.

The Clerk: Is this admitted, your Honor?

The Court: It may be received.

The Clerk: Plaintiff's 16 in evidence.

(The document referred to was marked Plaintiff's Exhibit 16, and was received in evidence.)

Mr. Lewis E. Lyon: At this time, while the witness is going through the rest of these papers, I will ask that these documents marked Exhibits 12-A to -J, inclusive, and 13-A to -F, inclusive, and 14, and 15 likewise, be received in evidence.

Mr. Pruitt: Your Honor, I would like to reserve the right to inspect these voluminous exhibits which Mr. Lyon has given to the clerk. I haven't had an opportunity to see them, and I wonder if he could reserve his offer until tomorrow morning?

(Testimony of Marlan E. Bourns.)

The Court: That is a legitimate request.

Mr. Lewis E. Lyon: It is absolutely all right.

The Court: I will not rule on the motion. We will let the matter go until tomorrow.

Mr. Lewis E. Lyon: That is all right.

Q. By Mr. Lewis E. Lyon: Now, you got through 12-I and 12-J in your chronological review of the dates of the making of these drawings. Complete your answer. A. Pardon me?

Q. You were getting the dates when these other drawings in this 12 series were made. You had -I, -J and -A, you told me when those were made. Now, let's get the rest of them if we can.

A. I believe 12-E was made after the one previously mentioned.

Q. Can you establish a date before which it was made?

A. Yes, they were made between the time of making the first vane sample instrument at Instrument Development, and the second one, inasmuch as they show models which were considered between those periods but which were ruled out before the actual making of the model.

Q. And those models, those five vane-type instruments, I believe that you are referring to, were those the first two models?

A. The first two models I am referring to. [92]

Q. And those two models were made before the Convair order of Exhibit 10-A?

A. Oh, yes, right.

Q. All right.



(Testimony of Marlan E. Bourns.)

A. I would think that 12-E was next in sequence, and that is my sketch.

12-G, part of it is my sketch and part of it is somebody else's, and it shows the different type of vane, so I should imagine it was made at about the time we replaced the original vane, which is shown by one of those other sets of drawings with the vane which is now on the instrument, and the dates of that can be determined.

Q. On which instrument?

A. The one in your hand, whatever exhibit number it is.

Q. Left hand?           A. Left hand.

Q. That is Exhibit 7.

A. Exhibit 12-F shows a body and wall and cover member for a vane unit, which is substantially identical to the construction that was used in the second model.

Q. And that second model is the Exhibit 9 model?

A. Yes. It also shows on the back side in one corner various sketches relative to linear motion potentiometers and pivoted mountings for them.

Q. Whose sketch is that? [93]

A. That is all in my handwriting, my sketches.

Q. Does this show a simultaneous consideration of the vane and linear motion?

A. Yes, it does. I was stingy with paper.

Q. Was or was not this sketch made at the Instrument Development Company's place of business?

A. No; I believe it was made at my home.

(Testimony of Marlan E. Bourns.)

Q. And taken to their place of business?

A. Yes. In fact, that is the case with nearly all of the sketches which are made by me. Whenever I was at Instrument Development Company, in general Percy Skaling did the sketching and I made suggestions, whereas at my home I did all the sketching myself.

Q. Is there a differentiation in that regard between the yellow paper sketches and white paper sketches?

A. There very well might be. It seems I had a supply of yellow paper.

Q. I am not asking you what might be but I am trying to get an order in this. Were these yellow sketches made by you and taken to Instrument Development, while the white sketches were made at Instrument Development Company?

A. Yes, that seems to be the case, but it seems somebody scribbled some screws on this one yellow page.

Q. Continue with your chronological review of these exhibits. [94]

A. 12-D shows a vane unit, and it was not made by me and is on white paper, and I assume was made prior to the making of the second vane model.

Q. Why?

A. It shows the general construction which was used in that vane model.

Another sketch, 12-C, shows a vane model, and there is a point of interest here, it shows in one instance a one-piece lid in the upper right-hand

(Testimony of Marlan E. Bourns.)

corner with the bearing mounted directly in the lid, and in the lower left-hand corner it appears to show a different construction, wherein the bearings are mounted in the body and the wall, and the electrical elements would then be mounted in the lid. We did make units both ways at various times.

Q. When you get to 12-C, Mr. Bourns, you get to the proposition where someone has dimensioned the instrument. A. Yes.

Q. Is that true of these earlier sketches or other sketches?

A. I don't believe there were dimensions on many of them, although they generally were to scale in some cases, I think.

Q. I notice on 12-E that you pointed out that someone had made some figure drawing, there are notations on the bottom; are those apparently dimensions? [95]

A. Yes, those are probably over-all dimensions of the three major dimensions of the finished instrument.

Q. And on 12-J there are some dimensional indications on the bottom right-hand corner?

A. Right.

Q. Are those in your handwriting?

A. Yes, they are.

Q. All right. Now, proceed.

A. 12-B bears the date December 17, 1946, and I have my signature in the upper right-hand corner, and it shows a linear motion potentiometer and gives some dimension, namely, the body was to have

(Testimony of Marlan E. Bourns.)

been made out of half-inch square bar two inches long and a rod 3/16ths in diameter.

Q. I note that this is not on yellow paper. Who made this sketch? A. I did.

Q. Now, does this have any indication as to where this sketch was made?

A. No. I feel sure this was made at my home.

Q. Is this sketch on both sides of the paper, or only one side? A. Only one side.

Q. When was this sketch made?

A. December 17, 1946 is written on here. [96]

Q. Is that in your handwriting? A. Yes, sir.

Q. Did you date that at the time that you made the drawing?

A. I assume so. In fact, apparently I felt there was significant material in it and dated it and signed my name up at the time for whatever it may have been worth.

Q. The word below the date is "linear pot"; in whose handwriting is that?

A. That is not in mine. I think that is in Percy Skaling's writing. I believe that checks with these others. Yes, it appears to be his writing.

Q. Is there any other writing on this sketch on Exhibit 12-B for identification which is not in your handwriting?

A. No, I don't see any, just the words "linear pot."

Q. Is there anything on Exhibit 12-B which was not on that exhibit on December 17, 1946, other than perhaps this wording "linear pot"?

(Testimony of Marlan E. Bourns.)

A. No, that is the only possibility. I haven't had it in my possession.

Mr. Lewis E. Lyon: At this time, your Honor, having finished with this series of sketches and this material it might be an appropriate time to stop, rather than go into a new subject matter. [97]

The Court: Yes. After counsel has examined them I will look at those sketches.

The Witness: Here are two other sketches which were over at the side and were not considered, which probably should have been.

The Court: Show them to Mr. Lyon and see if he wants them.

Mr. Lewis E. Lyon: Yes, I want the dates of these two sketches.

The Witness: I think we assigned a date to it.

Q. By Mr. Lewis E. Lyon: 12-A, we have, and 12-H, I don't believe you testified to the date of that. Will you do that, please?

A. This was made after the first model was made, inasmuch as one of the notations on the back is to use a thinner metal for the cover, so that it would have been made right after the completion of the model of the first unit, and far prior to the making of the second model, inasmuch as we did not make another unit having a sheetmetal cover at all, although on this I suggested a thinner metal cover and various other similar items.

Q. The first model—to which model do you refer? A. The big one.

Q. You mean the vane-type model?



(Testimony of Marlan E. Bourns.)

A. Vane-type, yes. [98]

Q. And that is Exhibit 7, this one? A. Yes.

Q. All right. Now, are there any other drawings the date of which you have not established? I think generally there are these drawings of the series 13 and 14, which you say are Mr. Skaling's drawings, and can you fix the date of those drawings with reference to the time of construction of the instruments?

A. I believe so, inasmuch as these sketches would have been made after I had requested Instrument Development to make a model, and before the model was made, and in fact probably before any of the parts were made in both cases.

Q. In both cases? A. Yes.

Q. And the 13 series refers to the first linear motion potentiometer, does it? A. That's right.

Q. That was made when?

A. I believe the parts for the model were completed in the latter part of December 1946.

Q. All right. Now the 14 series drawings -A to -H refer to which model?

A. To the first vane-type unit.

Q. And that is Exhibit 7, the large one?

A. Yes. [99]

Q. And that was completed when?

A. I believe the parts were completed approximately the middle of December of 1946.

\* \* \* \* \* [100]

Mr. Lewis E. Lyon: At this time, your Honor, I will renew the offer in evidence of Exhibit 12-A

(Testimony of Marlan E. Bourns.)

to 12-J inclusive; 13-A to 13-F inclusive; 14-A through 14-H, inclusive; and 15.

The Clerk: Are these admitted, your Honor?

The Court: They may be received.

The Clerk: Exhibits 12-A to 12-J inclusive, 13-A through 13-F inclusive, 14-A through 14-H inclusive, and 15 are in evidence.

(The exhibits referred to were marked Plaintiff's Exhibits 12-A to -J, 13-A to -F, 14-A to -H, and 15, and were received in evidence.)

### Direct Examination—(Resumed)

By Mr. Lewis E. Lyon:

Q. Mr. Bourns, on the matter of the linear motion potentiometer, I do not believe that I have asked you the date [103] of the first order, the first purchase order received for the linear motion potentiometer. I believe that has heretofore been established in the depositions. I hand you a set of three photostats and ask you if this is the first order received on the linear motion potentiometer?

A. Yes, it is.

Q. And what was the date of receipt of that order?

A. The order was dated February 26, 1947, and it is marked confirmation, so it is probable that I received a phone call on or about that same date giving me the order number.

Mr. Lewis E. Lyon: I will ask that this purchase order be received in evidence as Exhibit 17, being three sheets.

(Testimony of Marlan E. Bourns.)

The Clerk: Is this admitted, your Honor?

The Court: It may be received.

The Clerk: 17 in evidence.

(The exhibit referred to was marked Plaintiff's Exhibit 17, and was received in evidence.)

Q. By Mr. Lewis E. Lyon: Was this order, Exhibit 17, filled by you? A. Yes, it was.

Q. When?

A. I believe the instruments were delivered April 12, 1947. \* \* \* \* \* [104]

By Mr. Lewis E. Lyon:

Q. Mr. Bourns, you have testified concerning the tests given of the potentiometers in order that they meet the requirements of exactness, and I believe that you have a device here which will demonstrate the preciseness required of such of these instruments. Will you demonstrate that? Just bring it right up. A. All right.

(The witness does as requested.)

Q And in doing that, will you describe the equipment which you have produced?

A. All right. This particular piece of equipment is generally similar to the testing device that I mentioned this morning, although that particular device was made in a slightly smaller black case with Bakelite paneling. It did incorporate a helipot, and a so-called duo-dial for the making of [148] measurements, and a meter.

Q. Just a minute. You are going to use some terms that I am sure no one in the court room will know what you mean. You started out with "heli-

(Testimony of Marlan E. Bourns.)

pot," and it is a complete stranger to me, and it will be to the record. When you use terms of that kind, will you tell us what you are talking about?

A. The helipot is a trade name for a multi-turn rotary type of potentiometer. This particular one has ten turns. And attached to it is a dial with a vernier arrangement, such that the outer dial records each of the turns, whereas the inner dial indicates a reading of the position of the shaft of the potentiometer within each turn.

This dial is calibrated in such a manner that each division on the inner dial represents one-tenth of one per cent of the voltage impressed across the entire potentiometer when it is hooked up in the manner in which it is hooked up in this device.

Q. All right. Now, what is the purpose of this instrument?

A. The purpose is to make accurate calibrations of potentiometer type instruments of any kind.

In addition, other tests can be performed, and various instruments can be tested simultaneously by the selector buttons which are shown here. [149]

Some of the typical tests which can be made are the tests which we call shorts to case. It is important that the electrical elements be completely insulated from the case of these instruments, and we check that particular characteristic.

Q. That is throughout the range of the shaft?

A. Through the range, that is correct. In fact, that is the reason basically that it is necessary to have the shorting strip and the secondary contact,

(Testimony of Marlan E. Bourns.)

as shown by our various plates. Otherwise it would be possible to tie the wiper directly to the shaft, as an example. [150]

Q. That is, the reason for the shorting strip and its mounting in the cover—— A. That's right.

Q. ——is to avoid any possibility of shorting to the case?

A. That's right. Because the instrument itself may be mounted to some part of an airplane or missile, and the electrical connections may be at some different potential than the metal to which it is attached.

Q. You have an instrument in your right hand here which you keep pointing to; will you just state for the record a clear description of what that is?

A. This particular instrument is a center tap dual linear motion potentiometer. It is our model 115 CT.

Q. It is shown in Exhibit 15, is it, by a plate?

A. That exact instrument is not shown; however, plate 21 shows an instrument which is substantially identical, with the exception that it does not have the center tap, and hence there is one less terminal on each side.

Q. I see. All right. Now, this particular potentiometer which you have in your hand is mounted. What is it mounted on?

A. It is mounted on a little block to which is attached a depth micrometer for the purpose of moving the shaft back and forth by known increments. [151]



(Testimony of Marlan E. Bourns.)

Q. That is, you can measure to a thousandth of an inch the amount of movement of the shaft by the use of this depth micrometer, is that correct?

A. Yes, sir, that is correct.

Q. How is this instrument, this potentiometer, coupled with this test device that you have defined?

A. We use three conductor cables which plug into any of six receptacles on the back of the equipment, and in this particular instance we have three alligator clips which tie to the terminals. In some instances we have clip boards which fits specific models for rapid test purposes.

Q. Now, will you connect these two instrumentalities together?

I may suggest it would probably be advisable for the purpose of the record to have this instrument in its complete form as now coupled together photographed so that it will show, and use photographs in the record rather than to place these instruments in the record.

The Court: I think Mr. Childress would appreciate that.

The Clerk: Yes, it is hard to fold those things together.

The Court: He doesn't like to hold physical exhibits when we have no place to put them.

Mr. Lewis E. Lyon: This looks to me like a valuable test instrument. [152]

The Court: That is all right. I once had a gyroscope worth \$16,000 in a patent case, one of the first ones I handled.

(Testimony of Marlan E. Bourns.)

The Witness: I have set the micrometer which controls the movement of the shaft at six hundred thousandths of an inch, and have made a measurement using the dual dial and helipot, and the sensitivity buttons together with the null indicating meter which is 12.5 per cent.

Q. By Mr. Lewis E. Lyon: What does that 12.5 per cent mean?

A. That indicates that electrically we are 12.5 per cent away from one end of the instrument.

Q. All right.

A. I can move this——

Q. Your answer is that you do not know whether you have 12.5 per cent of the total resistance in the circuit or 87.5 per cent of the total resistance in the circuit, is that correct?

A. Well, actually there is a color code, one lead is white and one is black, but at this particular moment I forget which is which, these buttons permit the reversal so that I can also read the 87.5 per cent, and by know which of these leads corresponds to which terminal it is possible to determine which end I am reading from.

Q. Now, by making the second test you can determine [153] which end you were reading from originally, can't you?

A. That now reads 87.6, which is one-tenth per cent within correlation of the first reading.

Q. Now, so that we are reading from——

A. I can determine by physical inspection that we are reading from the end of the instrument op-

(Testimony of Marlan E. Bourns.)

posite the shaft, since the shaft is now pushed in nearly all the way.

Q. All right. Now, will you set that to a second reading?

A. All right. I will set it at .45. At that position I obtain a reading of 23.75 per cent.

Q. All right. Is this instrument used to test these potentiometers to this degree of accuracy?

A. Yes, it is.

Q. Is this a required degree of accuracy?

A. That is correct. We take our readings to the nearest tenth per cent, which is——

Q. In demonstrating the repeatability of these instruments, will you go backwards through those same two settings, return to the six thousandths, or six hundredths, I guess it is, reading, and then to the forty-five hundredth reading, and see if you get the same reading.

A. All right. I should explain in any wire-wound potentiometer the contact may at any time sit between two immediately adjacent [154] wires, so that it is almost possible with an infinitesimal movement for the contact to rest on either one wire or the adjacent wire, so that you can never be sure of a repeatability which is greater than the resolution of the instrument, and by "resolution" we mean the spacing of the wires that are wound on the element.

Q. And that spacing of the wires on an instrument of this type is in thousandths approximately how much?

A. Approximately one thousandth of an inch in

(Testimony of Marlan E. Bourns.)

this particular case. I have a reading of  $12\frac{1}{2}$  per cent, 12.5.

Q. Which setting is that on?

A. That is at .600.

Q. So at this time you came out with absolutely the same reading without any deviation, is that not true?

A. As I recall that is the same reading.

Q. Now, return it to the forty-five hundredths position.

A. All right. I now have a reading of 23.75 per cent. [155]

Q. Now, will you demonstrate the use of this apparatus in determining that there is no shorting throughout the entire travel?

A. I lack a lead in order to determine that. Another lead has to be plugged in.

Q. And you don't have that lead here?

A. No, I don't.

Q. Just point out how it is done, then?

A. We simply push this button which says "Insulation Resistance," and since we are using a 600-volt battery we have a secondary button for the protection of the operator, which is pushed only when that test is being made, and it applies 600 volts DC between the terminals and the case of the instrument. The lead, which is not here today, is attached to the body, the metal body of the instrument, and to the meter.

Q. You mean you impress across these little devices 600 volts?

(Testimony of Marlan E. Bourns.)

A. That is right. And with that voltage impressed they must have 50 megohms resistance, and that is 50 million ohms.

Q. And what is the capacity, or, what are the specifications of voltage impression these things are required to operate at?

A. Between the elements and the case, or across the—— [156]

Q. Across. They are given a certain capacity. What is the ordinary voltage impressed upon the device in its use?

A. One of the most common voltages is 5 volts.

Q. 5 volts?

A. That happens to be used in telemetering testing extensively.

Q. And you tested with 600 volts?

A. That is in a different way. The 5 volts are applied from the end of the electrical winding to the other end, whereas the high voltage is applied from both windings and contact assemblies to the case, to determine they are insulated.

Q. All right. Now, there is no such use as that in actual use, then?

A. No, except that it is important that there be no shorts between the elements and the case, or it might cause failure not only of the instrument, but possibly of the missile, through shorting of the power supply.

Q. I am trying to get the reasoning behind impressing 600 volts on a device that is supposed to operate at 5 volts.



(Testimony of Marlan E. Bourns.)

The Court: He merely says it is in a different direction. He says it is 600 in one direction, and the other in a different direction.

The Witness: The 500 volts or 600 volts is impressed between the electrical terminals and the actual body and shaft of the instrument, since the body and shaft are tied physically, and electrically to the missile frame itself, and hence the other connections to which the missile power supply and battery may be connected may be at some potential such that a short between the body of our instrument and one of the terminals would cause excessive battery drainage or failure of other components.

Q. By Mr. Lewis E. Lyon: All right. Now, what other tests of these instruments are made, in accordance with their requirements, and what do the tests consist of?

A. We have to determine the total resistance of the instrument, and that is done by pushing this button.

Q. That is also done on the same instrument?

A. Yes.

Q. That can be told at these terminals (indicating), can it not?

A. I think it can. There is a built-in Wheatstone bridge in this device, which has a main scale and a multiplier. At present the main scale is set at 100, and the multiplier at 100, which gives 10,000 ohms check, and in reading on the meter we find a deviation expressed in percentage of whatever resistance we set the dials at of 6.4 per cent negative.

(Testimony of Marlan E. Bourns.)

In this particular case our resistance tolerance is plus or minus 10 per cent. In most instruments it is plus or minus 5 per cent.

Q. Now, what other tests are made of these instruments [158] in order that they may meet the specifications of their use?

A. We normally check the end setting. By that we mean we move the shaft to both extremes of travel, and measure the resistance, or the voltage ratio, I should say, which is exhibited at that point. That can be done by means of this dial, and it can also be done by means of a quick check feature, which is built in and reads directly on the meter.

Q. Now, is there any other test that is made?

A. Yes. We check for what we call noise, and what is normally referred to on our calibration as a scope test, the reason being we originally used an oscilloscope to make the test. By that I am referring to any electrical discontinuity while the shaft of the instrument is being actuated.

An auxiliary oscilloscope device or noise-testing circuit is connected to the back of the instrument, and by pushing your particular button it connects that to the circuit.

Any discontinuity whatever during the testing of the instrument gives it a reject, from our standpoint and the customer's.

Q. Is there any quantitative noise requirement that is connected with that?

A. There are various devices on the market very recently [159] which give a quantitative measure-

(Testimony of Marlan E. Bourns.)

ment, and we also earlier, through use of the oscil-láscope, which was calibrated, were able to make quantitative measurements.

Q. Is this type of test equipment that you have before you what you refer to as test equipment which you developed and regarded as one of your confidential matters?

A. Yes, it is very similar. That particular device did not have the built-in Wheatstone bridge, but used an auxiliary bridge, which was connected by pushing a button at the top.

Q. Then, I take it this is a later model of that test apparatus? A. Yes, it is.

The Court: Has this a name? I just wondered if this has a name.

The Witness: A potentiometer test meter would be the name.

The Court: It is a form of a meter?

The Witness: Yes.

The Court: A test meter, I mean.

Q. By Mr. Lewis E. Lyon: It has no commercial name. It is one you built in your own place; is that right? A. Yes, we did.

The Court: And it will make all the tests to determine the accuracy of the other instrument?

The Witness: Yes, that is right.

Q. By Mr. Lewis E. Lyon: Now, you have had considerable training in electrical engineering, I understand. Is there any other potentiometer use that you know of, the accuracy of which approaches

(Testimony of Marlan E. Bourns.)

the requirements of these potentiometers you have been selling.

Mr. Pruitt: I didn't hear that. Will you read it, please?

(The question was read.)

Mr. Pruitt: I will object to that, your Honor, as immaterial, unless some date is placed on that question. I don't see that it has any materiality up to the present time.

Mr. Lewis E. Lyon: The date is throughout the period of selling.

The Court: Overruled.

The Witness: One highly accurate device is the helipot, which is in this meter itself. It is very different than the device which we make, however.

Q. By Mr. Lewis E. Lyon: Well, in the radio field is there any requirement of this accuracy?

A. No, not at all. In fact, the general use of the potentiometer in the radio field is as a volume control, and customarily tolerances for that type of use are on the order of 20 per cent. [161]

Q. In any other field you can think of in the use of potentiometers, is there any requirement for accuracy?

A. I believe there is a bridge device made by Leeds & Northrup, which uses a large diameter rotary potentiometer, which is accurate.

Q. What is the use of that instrument?

A. It is quite similar to this use, in the sense that the variable potentiometer is used to measure an electrical value. Actually, it is used to measure

(Testimony of Marlan E. Bourns.)

resistance and differs from this in that it is less than a full turn of operation compared to ten turns for this device.

Q. Now, this helipot you say you have in this test instrument you have in front of you, was that one made by you?

A. No, that is made by the Helipot Corporation.

Q. And what accuracy does that have?

A. Well, actually, when we first obtained these units, we needed greater accuracy than that normally provided, and it was necessary to purchase special instruments which were selected and hand-adjusted, in order to assure that the required accuracy would result. It generally is accurate to .05 per cent.

Q. Is there any place that you know of that there is a requirement for precise repeatability of a potentiometer as in this field of guided missiles which you have been supplying? [162]

A. Not except for the two instances already mentioned.

Q. You have, have you not, the problem of weight and size also in the guided missile field. Does that differ from the instances that you have specified of the Leeds & Northrup instrument, or this Helipot?

A. Yes, it does. The Leeds & Northrup device is rather large, and the Helipot device likewise is large compared to our linear motion potentiometer, for example. Furthermore, in connection with missile applications there are severe vibrations and ac-



(Testimony of Marlan E. Bourns.)

celerations and life cycles that are required for satisfactory operation.

Q. Now, is this instrument that you have in front of you one that is used for these rapid cycle tests of this instrument, or do you have another instrument for that purpose? You say you test for 200 cycles per minute of movement or vibration. Is this instrument used in carrying out those tests?

A. The main thing which it is desired to determine during that test is whether that instrument has noise or discontinuity, and through the use of this meter, coupled with noise measuring devices, it is possible to determine whether the instrument operates satisfactorily under those conditions.

Q. Now, how about the vibration? Does the vibration test the same as the test for repeated cycling? [163]

A. For vibration we mount the entire instrument on a commercial vibration machine, which subjects it to vibrations comparable to those encountered in aircraft, and monitor the output to be sure it is performing satisfactorily.

Q. Why do we have to have such a long life in a device of this character? Isn't it true, or am I wrong there,—assuming the device is mounted in a guided missile, the missile is sent aloft, that is the end of it; isn't that true?

A. That would seem to be the case. Actually, at this stage of the missile art a tremendous amount of testing is done, and, furthermore, some missile systems use a so-called dither hydraulic system,

(Testimony of Marlan E. Bourns.)

wherein the potentiometer is subjected to 210, in one instance, cycles per second of vibration over a limited stroke, so with that high speed of operation, it only takes only a minute of a few hours to reach a life cycle on the order of several million.

Q. Well, then, these instruments are primarily designed for the test staging in the guided missile art; isn't that true, rather than for use in guided missiles that might be manufactured for the purpose of use of such missiles?

A. No, they are used in the missiles themselves.

Mr. Pruitt: Just a moment. I object to that, your Honor, on the ground that it is hearsay, so far as this witness is concerned, as to what use is made by people who [164] manufacture test guided missiles, unless some other foundation is laid.

The Court: Will you read the question, please?

(The question was read.)

The Court: I will sustain the objection because it is speculative. He has already testified that at the present time they are being used in tests, and what they might be used for later on depends a good deal upon the future. I will sustain the objection. The first part of the question has already been answered. [165]

### Cross Examination

Q. By Mr. Pruitt: Mr. Bourns, yesterday you testified that Convair presented a problem to you back in 1946 which you undertook to solve, is that correct? A. Yes.

(Testimony of Marlan E. Bourns.)

Q. And did Convair approach you with respect to that problem, or did you approach Convair?

A. I learned of it through Convair personnel.

Q. Did you call someone at Convair at that time?

A. I believe the first knowledge I had of Convair's problems was through association with Convair engineers by the name of Dave Wagner and Pete Nagy, in connection with work which I was doing through N.O.T.S.

Q. Do I understand that you knew Mr. Wagner and Mr. Nagy prior to the time that they presented this problem to you?

A. Yes.

Q. And when did you first meet either Mr. Wagner or Mr. Nagy?

A. I can't be too accurate on that date. I believe it would be in the winter or spring of 1946.

Q. Do you mean in the winter of 1945 or the spring of 1946?

A. Well, I was really referring to the early months of 1946.

Q. Early months of 1946.

A. At the time you first met—which one did you meet at that time, Mr. Wagner?

A. I don't recall which one I met first.

Q. Was it a personal meeting?

A. They were working on the same missiles for Convair on which the Naval Ordnance Test Station was installing [188] telemetering equipment, which I had worked on for Naval Ordnance Test Station.

(Testimony of Marlan E. Bourns.)

Q. At that time, at the time of your first meeting and the ensuing period did you have discussions from time to time with Mr. Wagner or Mr. Nagy concerning this problem?

A. We did some testing at Inyokern, and in the evening at the Officers Club we often discussed various items relating to the missiles and the problems, and our personal hopes for the future, and so forth.

The Court: Were you employed by Convair at the time?

The Witness: No, sir. I was employed by Naval Ordnance Test Stations.

Q. By Mr. Pruitt: You are referring to the period generally 1946, starting in the early part and continuing on up until the termination of your employment at N.O.T.S.?

A. Yes, with the exception of several months when I was in Michigan, I believe that period was from August until November. My father passed away in Michigan and I was absent for several months.

Q. During these discussions with Mr. Nagy and Mr. Wagner, prior to August of 1946, did you discuss the particular problem that gave rise to your experimental work in vane potentiometers?

A. While visiting the Convair plant I saw the device which was previously being used and was told that it was [189] unsatisfactory.

Q. By whom were you told that it was unsatisfactory at that time?



(Testimony of Marlan E. Bourns.)

A. One of the people who told me it was unsatisfactory was a union steward at Convair with red hair who was in charge of installation of components, and I don't recall his name.

Q. Were you in the company of someone from Convair when you saw the union steward, or were you by yourself?

A. He was a Convair employee.

Q. I mean other than you and the steward was anyone else present from Convair?

A. Possibly.

Q. You don't recall at the present time?

A. No.

Q. What device was the union steward referring to at that time?

A. He was referring to a gear operated vane instrument manufactured by Giannini.

Q. Is that the instrument you identified as the Giannini Microtorque potentiometer?

A. The Microtorque potentiometer was one of the components of this assembly, but only that.

Q. What were the other components of that assembly?

A. There was a vane, at least one shaft to various parts which constituted a framework in which were mounted the shafts [190] to which were attached two gears, and to which was mounted the potentiometer.

Q. Was this assembly manufactured entirely by Giannini, if you know?



(Testimony of Marlan E. Bourns.)

A. I don't know. It was my impression that it was.

Q. Was it explained to you in what respects this telemetering system was unsatisfactory?

A. Yes, I think it was. In fact, this union steward showed me this one, and using some words which I can't use here, said, "This thing is all bound up and the pot is loose, and it is really a mess."

Q. Was he showing the particular assembly to you at the time he made that comment?

A. Yes.

Q. While you were at N.O.T.S., telemetering missiles and torpedoes were being carried on as part of your duties, was it not?

A. Will you repeat that, please?

Mr. Pruitt: Read the question, please.

(Question read by the reporter.)

The Witness: I don't understand the question.

Q. By Mr. Pruitt: I will rephrase it. While you were at NOTS, as part of your duties did you have any function in connection with the telemetering work relating to missiles and torpedoes?

A. Relating to missiles. I don't recall any relating to torpedoes.

Q. And the NOTS was doing the same related work that Convair was doing in that field, were they not, at that time?

A. No, I don't believe they were.

Q. Well, did they use potentiometers in connection with missiles at NOTS while you were there?

(Testimony of Marlan E. Bourns.)

A. I don't believe they were making missiles nor using potentiometers at NOTS.

Q. You have a positive recollection that that is the case?      A. Yes, sir.

Q. And when was it that you left the employ of NOTS?

A. I returned from Michigan approximately November 5th, and at the time of returning, or prior to returning, was informed that I must either move to Inyokern or quit. And I gave termination notice, and was informed that I had vacation coming and could either take the vacation at that time or work on some test equipment, which I had been making for my own use in the evenings, if I preferred. The date of termination was approximately the middle of November. [192]

The Court: Were you a civilian at that time?

The Witness: Yes, sir.

Q. By Mr. Pruitt: That was about the middle of November 1946, is that right?

A. Yes, sir. I believe November 15th was the exact date.

The Court: Well, they moved part of that facility to Riverside, didn't they, the part that was under the Bureau of Standards? Or you never worked there?

The Witness: No, sir, only on tests that were made at Inyokern.

The Court: Part of the facility that was under the Bureau of Standards was moved and is now in Riverside?

(Testimony of Marlan E. Bourns.)

The Witness: Possibly so. I am not familiar with that.

The Court: All right.

Q. By Mr. Pruitt: Was the steward you mention the only person at Convair that explained to you the problem they were having in connection with potentiometers used in conjunction with missiles?

A. He explained that particular device. Mention was also made to me that other pickup or transducer devices were unreliable and unsatisfactory in their missile.

Q. Were those transducers identified to you? Do you know what they were using at that time?

A. Only in general terms. At that stage they were [193] experimenting with several different basic types, such as not only potentiometers, but variable capacitance, variable inductance, variable reluctance, and other approaches to the problem.

Q. Do you remember any specific person at Convair that you spoke to concerning this problem, other than the shop steward you mentioned?

A. At what period of time?

Q. During 1946, prior to the time you submitted the vane instrument to Convair. Did you talk to Mr. Chaney?

A. I did talk to Mr. Chaney, but I am not sure whether it was prior to that time or subsequent.

Q. Do you remember any persons that you might have talked to other than the shop steward and Mr. Chaney?

(Testimony of Marlan E. Bourns.)

A. Probably various mechanics doing assembly work on the missile.

Q. Well, as I understood your testimony, the first vane drawing was identified as Plaintiff's Exhibit 12-J, which I now show you, is that correct; was that the first one that was made, to the best of your recollection?

A. I believe that is correct, the best that I can recall.

Q. I believe you testified that one which was dated November—I guess it is the shop order that was dated November 27th, or something, indicated to you what the second [194] drawing was, is that correct?      A. I believe so.

Q. So that 12-J was drawn by you sometime prior to November 27, 1946, is that your recollection?

A. If that was the date that was indicated.

Q. Prior to the making of the drawing shown in Plaintiff's 12-J, do you recall any persons at Convair that you spoke to other than the shop steward that you have identified?

A. I have already mentioned Mr. Nagy and Mr. Wagner, I believe.

Q. Did you discuss with them this particular problem that Convair was having?

A. I believe so. [195]

Q. Did you discuss that with them after your return from Michigan in 1946?

A. Certainly after my return, since that includes a long period of time.

(Testimony of Marlan E. Bourns.)

Q. You spoke to them before you left, too, did you not?

A. Yes, we did discuss matters in general before I left.

Q. Now, what position did Mr. Wagner have at Convair at that time?

A. I believe he was in their engineering department. I am not sure about any further details.

Q. Did you have any written or oral contract with Mr. Wagner, or any other official of Convair, commissioning you to develop an instrument such as is shown in your drawings at that time?

A. No, sir.

Q. Would it be correct to say that what Mr. Wagner told you was that if you could make an instrument which would be better than the one they were using, they would consider buying it from you?

A. It may be possible that that was implied, since they were dissatisfied with their present device and would presumably buy something better if they could obtain it.

Q. And you had told them, had you not, that you were planning to go into business for yourself, and wanted to find [196] some field where there was a chance of making some money, isn't that right, or words to that effect?

A. I believe I had indicated I have planned to go into the electronics field, possibly making telemetering equipment or oscilloscopes.

Q. In connection with the problem that Con-



(Testimony of Marlan E. Bourns.)

vair disclosed to you at that time, was their primary concern apparently the accuracy of the instrument desired, which I believe was five-hundredths of a degree?

A. I believe accuracy, repeatability, and reliability were the main problems.

Q. Now, the accuracy of five-hundredths of a degree, is that the same as the resolution which you explained earlier today?

A. Not necessarily.

Q. How do you distinguish the five-hundredths of a degree accuracy from the resolution of an instrument?

A. Various factors enter into that consideration. As an example, the gear-operated device had play between the gears such that an uncertainty could exist in the position of the potentiometer brush relative to the vane because of this slop in the gears.

Q. Whereas the resolution is measured from the shaft of the potentiometric element itself; is that right?

A. That is one way of measuring it, or by knowing the [197] number of turns of the wire on the potentiometer it can be determined.

Q. Now, resolution is sometimes expressed in percentage, is it not?

A. Yes, sometimes.

Q. And what is the percentage resolution requirement of the instruments, do you recall now, generally speaking?

A. That depends a great deal on the type and

(Testimony of Marlan E. Bourns.)

range of instrument. In the case of some of our longer linear motion potentiometers resolutions as low as half of a tenth of a per cent, or even greater, are encountered.

Q. And resolution is determined, is it not, by the size of the wire you use, and how close each turn is to the next turn, and the type of wire you use; is that correct?

A. I don't believe the type of wire would be a factor.

Q. Well, the type of wire would determine whether the same resistivity existed in the coil a longer period of time? Some wires have a longer period?

A. I am rather confused by several terms. Resistivity, as I understand it, is resistance independent of the size of the wire, and is a physical property of a metal and a metal alloy.

Q. But, primarily, the resolution depends upon the size of the wire, and the closeness of the wire on the resistance element? [198]

A. And the length of it.

Q. And the length of the resistance element?

A. That is correct.

Q. Now, in 1946 were you familiar with any resistors that were being manufactured at that time?

A. I had seen the Giannini Microtorque potentiometer, not only at Convair, but at an exhibit at the Pasadena Civic Auditorium.

Q. Is that the only one that you were familiar with at that time?

(Testimony of Marlan E. Bourns.)

A. What was the breadth of your category, again?

Q. The resistors. A. The resistors?

Q. Yes, wire-wound resistors.

A. Wire-wound resistors. Well, there are fixed resistors which are wire-wound, such as those used in Wheatstone bridges, with which I was familiar.

Q. What is the accuracy of that type of resistor?

A. I am confused by your term "accuracy."

Q. I am attempting to use your term, Mr. Bourns. The percentage figure you used before would be satisfactory. How accurate does a resistor have to be to work accurately in a Wheatstone bridge?

A. It depends upon the particular portion of the bridge circuit in which it is located. [199]

Q. What trade names of resistors were being manufactured in 1946, to your knowledge?

A. I believe Ohmite is one of the manufacturers of a fixed resistor with a vitreous enamel coating.

Q. And was Giannini the only company you knew of at the time that was making wire-wound potentiometers at that time? A. No, sir.

Q. What other companies were in that field at that time, that you knew of?

A. Various well-known manufacturers of radio type volume controls also make wire-wound controls of that same general type.

Q. Was Helipot making potentiometers at that time? A. I am not positive.

(Testimony of Marlan E. Bourns.)

Q. When you contacted Convair in 1946, and became aware of the problem you have described, was that the first time you knew that there was such a problem?

A. Inasmuch as we were working with telemetering equipment, our engineers at N.O.T.S. attended various meetings and discussions, and there learned that transducers or pickups were a major difficulty in the missile and aircraft test field.

Q. Now, you mentioned the crude arrangement that Convair had, consisting of a resistor with a spring and a string attached to it. When did you see that at Convair? [200]

A. I don't believe I saw that.

Q. That was just described to you by one of the personnel at Convair? A. Yes.

Q. Which person was that?

A. Either Dave Wagner or Pete Nagy; I am not sure which.

Q. Did they say what they were using that device to measure?

A. Either the movement of a hydraulic actuator or the movement of a fin or control arm of the missile to which the actuator was attached.

Q. In your opinion, could a rotary pot of some kind have been used for that same purpose at that time?

A. They were using a rotary pot for that purpose.

Q. And was that the same one you described a while ago, the Giannini?

(Testimony of Marlan E. Bourns.)

A. I didn't see it, so I don't know.

Q. I believe you testified that in early 1947 you delivered an instrument to Convair which was similar to Plaintiff's Exhibit 8; is that correct?

A. Yes.

Q. And Exhibit 9 was the instrument, the No. 2 vane type instrument that you made; is that correct?

A. Yes. [201]

Q. When did you take this Exhibit 9 to Convair to display to them?

A. I believe within a few days after it was completed and assembled.

Q. And that was sometime in late December or early January of 1946 and 1947, respectively?

A. Early January, I think, yes, sir.

Q. I believe you testified that Convair had no specific criticisms of this particular model; is that correct?

A. Not as many as they had of the previous one.

Q. Whom did you talk to at Convair with respect to Plaintiff's Exhibit 9?

A. As far as I can recall, I talked to Pete Nagy, Dave Wagner, and Mr. Cheney.

Q. And did you display this instrument to each of the persons you have named, at that time?

A. Yes.

Q. Now, who was it at Convair that placed the purchase order for the purchase of the five vane type pots, according to the purchase order dated January 31, 1947, Plaintiff's Exhibit 10-A?

A. I don't know. It may show on there.



(Testimony of Marlan E. Bourns.)

Q. Was this purchase order mailed to you? Is that correct?

A. Yes. Mr. Miller seems to have been the one who [202] signed the order.

Q. Did you have any discussion with Mr. Merrill concerning this purchase order?

A. He telephoned me regarding the order prior to mailing it to me.

Q. And what did he say he wanted? Would it help you to refer to this?

A. Possibly so.

(The document was handed to the witness.)

A. I believe he indicated that he wanted a vane potentiometer with 2,000 ohm resistance, and .05 degree accuracy.

Q. Is that all he said, to the best of your recollection?

A. I believe he mentioned the terms of sale, as I discussed yesterday, the discount, and other matters.

Q. Did he refer to the instrument shown as Plaintiff's Exhibit 9 during that conversation?

A. I don't recall.

Q. Did Mr. Wagner, or any other official of Convair, tell you that the five vane type potentiometers should be substantially the same as Plaintiff's Exhibit 9?

A. I believe they felt that the principles shown in that sample were basically sound, and that the instruments they were purchasing should be similar to that. [203]

Q. So the only change that they wanted, so far

(Testimony of Marlan E. Bourns.)

as you know, was the 2,000 ohm resistance, and the accuracy of .05 of a degree; is that correct?

A. I don't think it is necessarily correct.

Q. What was the total resistance and accuracy of Plaintiff's Exhibit 9, if you recall?

A. I don't know.

Q. Well, can you examine Plaintiff's Exhibit 8 and Plaintiff's Exhibit 9, and point out any other differences in structure between those two instruments?

A. There is a difference in the travel, a difference in the arm, and in the counter-balance, in the stops, in the contact spring, and, of course, as I already mentioned, the instruments delivered did not have a lucite lid. The size is different in all—no, in two directions. The mounting is different. Those appear to be the main differences that I can see.

Q. And the instrument which you delivered to Convair, which was similar to Exhibit 8, was manufactured by Instrument Development; is that correct?

A. They made the parts for that instrument, yes.

Q. And you assembled it; is that correct?

A. Yes, I did part of the assembly work.

Q. At the time you sold the instrument to Convair, in line with the purchase or January 31, 1947, had you published [204] a catalogue for the Bourns instruments?

A. Not as far as I can recall.

Q. Had you assigned a model number to that

(Testimony of Marlan E. Bourns.)

particular instrument that you sold to them at that time?

A. No, I think that was one of the problems, in fact, that there wasn't any very good way of identifying the thing.

Q. Well, is Plaintiff's Exhibit 8 the same as your Model 201 potentiometer?

A. Which one is 8, now, and which is 9?

Q. 8 is the one that is similar to the one that you delivered to Convair, I believe.

A. Yes, that is similar to our 201.

Q. And subsequently the Model 201 was advertised in your catalogue; is that correct?

A. Yes.

Q. I show you now, Mr. Bourns, what purport to be four photostatic copies of order Nos. 1151 and 1194, respectively, which were taken from the files of Instrument Development Company, and ask you if you recognize either of those documents?

A. Yes, these appear to be copies of documents which were in the Instrument Development file.

Mr. Pruitt: I would like to have those marked as Defendants' A, for identification. [205]

(The documents referred to were marked Defendants' Exhibit A, for identification.)

Q. By Mr. Pruitt: Do those documents refer to the potentiometers that were sold to Convair pursuant to the purchase order which is Plaintiff's Exhibit 10-A?

A. Could I see them again, please?

(The documents were handed to the witness.)

(Testimony of Marlan E. Bourns.)

A. The order No. 1194 is applicable to the five potentiometers you mentioned.

Q. And the order marked 1151 relates to Plaintiff's Exhibit 9; is that correct?

A. Yes, that is right.

Q. All right, thank you. Now, at the time you talked to Mr. Wagner concerning the purchase by Convair of the five vane type potentiometers, did you discuss with Mr. Wagner the sale to Convair of certain linear motion potentiometers?

A. Could I have that repeated, please?

Q. Read the question.

(The question was read.)

A. I believe I indicated that I was making experimental models of linear motion potentiometers, and may have shown such a model to him at some time close to that.

Q. Now, the first linear motion potentiometer you made is Plaintiff's Exhibit 6; is that correct?

A. Yes.

Q. And would that have been the one you showed to Mr. Wagner at that time?

A. Yes, shortly after it was completed, I did show it to him.

Q. And when was that completed?

A. In the latter part of December, or early part of January, of 1946 or 1947, respectively.

Q. So it was approximately at the same time you were discussing with Mr. Wagner the sale of the vane type potentiometers; is that correct? You got your No. 2 vane type instruments at or about

(Testimony of Marlan E. Bourns.)

the time you got your first linear motion potentiometer, did you not,— A. Yes.

Q. —about December or early January?

A. I believe that was close to about the same time, that's right.

Q. Now, Plaintiff's Exhibit 4 shows a linear motion potentiometer utilizing a square shaft, does it not? A. Yes.

Q. And that was manufactured by D. B. Millikan Company? A. Yes.

Q. Was this a prototype model manufactured by them? A. Yes.

Q. And when was that manufactured? [207]

A. In the first part of 1947.

Q. Subsequently you ordered a quantity of linear motion potentiometers to be manufactured by D. B. Millikan Company, did you not?

A. Yes, I ordered the parts for those units.

Q. And did you assemble the units?

A. I helped with the assembly, and also the machining.

Q. At D. B. Millikan Company?

A. There, and I believe at home also.

Q. When did you go to the D. B. Millikan Company for the purpose of discussing the manufacture of the prototype, Plaintiff's Exhibit 4?

A. I don't recall the date.

Q. To whom did you speak at the D. B. Millikan Company? A. To Frank Gobel.

Q. Was anyone else present at the time?



(Testimony of Marlan E. Bourns.)

A. I believe Mr. Millikan and Ed Pitzer were present.

Q. And did you have with you at that time Plaintiff's Exhibit 6?

A. Yes, I believe so.

Q. Did you have any drawings or sketches of a potentiometer which you had in mind for D. B. Millikan to make at that time?

A. I don't recall what drawings were taken there. [208]

Q. Do you recall that some drawings were taken at that time?

A. I don't recall whether they were or not.

Q. It is possible that all you had was this instrument, Plaintiff's Exhibit 6, is that correct?

A. That is possible.

Q. At that time was there a discussion concerning the possible changes that would be made in the prototype manufactured by D. B. Millikan from the instrument identified as Plaintiff's Exhibit 6?

A. Yes, sir, I think we discussed the various changes that we could make.

Q. The D. B. Millikan Company was a machine shop subcontractor business, was it not?

A. I guess they did that partly. I think their main product was lawn furniture.

Q. And is it a fact that Mr. Gobels suggested to you that the utilization of a square shaft at the base of an instrument and a bottom plate would

(Testimony of Marlan E. Bourns.)

considerably facilitate the provision of the groove in the base?

A. I believe he felt that a square shaft would facilitate machining of that particular groove.

Q. Did he state the reasons for that at that time?

A. I think it is just a matter of machining preference, whether it is easier to machine a square slot or a [209] round hole as was done previously. In fact, I think I mentioned to him that considerable difficulty was encountered in boring the hole in the other model as accurately as was desired.

Q. In other words, with the round shaft and round bore the hole has to be bored and reamed very accurately or otherwise you will not get an accurate movement of the shaft, is that correct?

A. In both embodiments the workmanship has to be very accurate.

Q. Mr. Gobels' point was that you could get the accuracy easier and cheaper by providing a square slot and the bottom of a piece of metal than you could by boring a hole in a case like this, is that correct?

A. I think he felt that construction might simplify the machining.

Q. The instruments subsequently manufactured by D. B. Millikan were somewhat larger than this prototype, were they not?      A. Yes.

Q. Do you remember what size they were? Six inches or so?

A. Eight inches long, I would say.

(Testimony of Marlan E. Bourns.)

Q. When were those instruments delivered to you?

A. The parts for the instruments were delivered to [210] me, and the instruments finally delivered to Convair the first part of April, I believe, April 10 of 1947.

Q. Did you assign a model number to that particular instrument?           A. I may have.

Q. You don't recall at the present time?

A. I don't recall whether one was assigned at that time.

Q. Did you ever manufacture any more of that style with the square shaft and the base?

A. We considered making units of that type several years later.

Q. Did you actually make any?

A. I believe we did not. We checked into the procurement of suitable broaches and broaching equipment to make bushings with square holes, and found that the cost of the broach appeared to be excessive and did not proceed with it further.

Q. As far as you can recall at the present time, the prototype, that is Plaintiff's Exhibit 6, and the 40 instruments that you purchased from D. B. Milikan, which were—I am sorry, it is Plaintiff's Exhibit 4, and the 40 instruments which you say were about eight inches longer, were the only instruments that you ever manufactured using the square shaft protruding from the end of the case, is [211] that correct?           A. No, sir.

Q. What others were manufactured?

(Testimony of Marlan E. Bourns.)

A. Another unit was manufactured by the Milikan Company.

Q. When was that?

A. Very close to the same time as the one which you have here.

Q. How many instruments were involved in that purchase?      A. One piece.

Q. One unit?      A. Yes.

Q. Were there any other utilizing the square shaft?      A. Not as far as I can recall.

Q. When was that one unit purchased? You say it was in 1947 sometime?

A. I believe the parts were purchased in the first part of 1947.

Q. You testified that there were several, what you referred to as shaft post contact relationship which were considered by you, one being the square shaft, one being a round shaft, one being a side lug, and one being a shaft that protruded from the end and was free to rotate with respect to the contact carrying device; is that correct?      A. Yes. [212]

Q. Can you testify with respect to each one of those types the date, approximately, when you manufactured an instrument embodying that principle?

A. The date of the nonrotating round shaft would be that of the manufacture of the model which is now in the record; the square shaft date of initial manufacture is the date of either the one which is in evidence or the other prototype model which I mentioned.

Q. Can you give us the dates on those, Mr.

(Testimony of Marlan E. Bourns.)

Bourns, to the best of your ability? Let's take the square shaft first, that was sometime in January of 1947, was it not?

A. Yes, I believe so.

Q. The prototype, Plaintiff's Exhibit 6, was sometime in December 1946 or January 1947?

A. Yes, that is correct.

Q. When was the first production model of an instrument embodying that shaft principle manufactured by you?

A. That date would be applicable to the next linear motion instruments which we produced after the 40 that were purchased by Convair, and I don't recall when that was.

Q. Were those produced by you?

A. I think part of the machining was probably done in our garage on that group, yes.

Q. Was that the model that became designated as your 102 model? [213]            A. Yes.

Q. And that utilizes a round shaft, does it not?

A. Yes.

Q. Now, the shaft principle wherein the shaft is free to rotate with respect to the contact plate as shown on Plaintiff's Exhibit 11, now, when was that particular instrument model 110 manufactured by you, do you know?

A. Are you referring now to the model or that exact unit?

Q. This exact instrument.

A. I think that exact instrument is a relatively recent unit.



(Testimony of Marlan E. Bourns.)

Q. 1954? A. '54 or '53, yes.

Q. What model as shown in your catalog was the first model you produced in which this shaft principle was utilized?

Mr. Lewis E. Lyon: What catalog are you speaking about?

Mr. Pruitt: Any catalog. I want the model number that Mr. Bourns has assigned to the first instrument which he sold which embodied the shaft principle shown in Plaintiff's Exhibit 11.

The Witness: No direct correlation was made with model number with respect to the rotation or nonrotation of the shaft.

Q. By Mr. Pruitt: Well, do you remember what model [214] was the first model that you sold which employed that shaft principle shown by Plaintiff's Exhibit 11?

A. Probably a model 108 or 109.

Q. And when was the first sale of either of those instruments by you?

A. Are you referring to the model now, or to that——

Q. The model 108 or 109.

A. I can't give a very accurate date at this time.

Q. Can you state the year in which it was sold, according to the best of your recollection?

A. Not with much accuracy. I know it was before 1950, inasmuch as we made them in Pasadena.

Q. You mean it was prior to January 1, 1950?

(Testimony of Marlan E. Bourns.)

A. Specifically prior to September 1, 1950, since that is the time we moved to Riverside.

Q. Now, the other shaft principle was the side lug which was attached to the contact carrier; what model of yours was the first to employ that principle?

A. The model 114 was one of the first.

Q. When was that model first sold?

A. Again, I can't give a very accurate answer. I believe it would have been in 1949.

Q. Do you have any records available which would establish the date of first sale of the model 114 potentiometer? [215]

A. I think we may have.

Q. Do you have those here?

A. I don't believe so.

The Court: You search for them. If you find them, bring them in tomorrow.

Q. By Mr. Pruitt: Mr. Bourns, you mentioned in your testimony that current requirements made certain accuracies, specifications for your instruments in various ways; are you referring to requirements that are made by your customers?

A. Many of our customers nowadays have lengthy written specifications.

Q. And those specifications set forth such things as the range, do they?           A. Yes.

Q. The resistance?           A. Yes.

Q. The sensitivity?

A. That particular term is not generally used.

Q. The resolution?

(Testimony of Marlan E. Bourns.)

A. Sometimes.

Q. The linearity? A. Yes.

Q. The dimensions of the case of the instrument? A. Generally not.

Q. Are there any specifications concerning the size [216] of the instrument?

A. Sometimes there are maximums. At other times the dimensions are discussed between our engineers and the customer's engineers to determine generally what the smallest satisfactory instrument that we can make would be.

Q. Are there any specifications that you get that specify that the outside configuration of the instrument has to be in accordance with certain drawings that are enclosed with the specifications?

A. Some companies have the policy of showing instruments manufactured by a vender on their own drawings, in the interest of facilitating their purchasing procedure, so we frequently receive drawing of our own instruments, these drawings having been copied from our own outline drawings.

Q. Do you receive any, or have you ever received any specifications which required that the outside configuration of an instrument should be in accordance with a drawing which was not a drawing of one of your instruments?

The Court: I don't know whether he understands that.

Mr. Pruitt: Do you understand the question?

The Witness: Not too well.

The Court: A drawing that wasn't a drawing?

(Testimony of Marlan E. Bourns.)

Do you mean prepared by somebody else?

Mr. Pruitt: He testified, your Honor, as I understood him, that he sometimes got drawings with specifications which [217] were drawings of his own instruments, and I am asking him whether he got specifications which enclosed drawings of an instrument which was not of his own design.

The Court: That is different.

Q. By Mr. Pruitt: Do you understand the question, Mr. Bourns?                    A. I believe so.

We sometimes receive outline drawings that show on outside configurations that are not peculiar to our own instrument.

The Court: In other words, in this business of manufacturing an instrument of high precision sometimes a man gives you an outline and says, "I want an instrument that will conform to this and achieve this"?

The Witness: Yee, that is exactly correct. Because frequently——

The Court: That is why you are in the precision business?

The Witness: Right.

The Court: You are not a tool caster and make castings for heavy tools, and things like that?

The Witness: No.

The Court: Your work is related to precision?

The Witness: Right.

The Court: All right.

Q. By Mr. Pruitt: I call your attention, Mr. Bourns, to Plaintiff's Exhibit 3, plates 5 and 6,

(Testimony of Marlan E. Bourns.)

which purport to show a Bourns model 118 in plate 5 and Edcliff model D in plate 6, and ask you if that is not an instrument the outside configurations of which were dictated by the customer for those instruments, is that correct?

A. In this particular instance our sales engineer Ed Goeppinger contacted Douglas engineers, Douglas had previously purchased our model 108 and model 111-131 in extensive numbers, and had indicated failure of the 111 because of misalignment of the shaft, wherein although we used a very large diameter hardened shaft the shaft was actually made to bend, they thereupon purchased the 114, which is a side shaft unit, as I mentioned, in an effort to solve this alignment problem. It thereupon became evident that they required travels and other features which were not incorporated in the 114. And, furthermore, we strenuously objected to selling the model 114, because of the open slot in the side. We had encountered a great deal of difficulty with binding of the parts from foreign material, and with electrical failures resulting from foreign matter getting on the contacts and elements. Hence our engineer, Mr. Goeppinger, went to the Douglas plant to discuss an instrument——

Q. Confine your testimony to what you know of your own knowledge, Mr. Bourns.

Mr. Lewis E. Lyon: I think he is. [219]

The Court: You asked for an explanation how it came about.

Mr. Pruitt: Your Honor, the question was, were



(Testimony of Marlan E. Bourns.)

the plates that were demonstrated to the witness an instrument the outside configuration of which was dictated by a customer of Mr. Bourns.

The Court: It isn't a question that can be answered yes or no. He has the right to explain it. If not, I will sustain the objection to the question and strike it all out. He can't answer it yes or no, and it wouldn't be revealing. He is trying to explain to you how it came about. He has a right to. You are not dealing with a laborer; you are dealing with a scientist, an expert.

The Witness: Mr. Goeppinger discussed these matters with the Douglas engineers and made sketches showing the space limitations in the missile and described to me the fact that the skin of the missile fit in this general area, which necessitated the removal of corners of the instrument to clear the skin of the missile. He also learned that an object was in this central area. And, further, Mr. Goeppinger, together with their engineers, determined that a mounting by means of elongated slots, which would permit adjustment of the instrument, would be most desirable for Douglas' application and for our manufacture.

On the basis of those sketches this instrument was [219-A] produced, and was subsequently shown on Douglas' drawings.

Q. By Mr. Pruitt: Just so that I understand you, Mr. Bourns, did you say that Mr. Goeppinger or yourself made sketches showing that external configuration of that instrument?

(Testimony of Marlan E. Bourns.)

A. He made sketches showing the space limitations in the Douglas application.

Q. What space limitations did he show on that? The length of the mounting area, for one thing?

A. Generally the length, and particularly the fact that these corners had to be cut off, and that this central area had to remain clear, and that mountings should be provided in this particular area.

Q. And subsequently when Douglas specifications were issued they enclosed drawings which required this exact envelope configuration, is that correct?

A. No, sir; they were simply maximum dimensions.

Q. Was the silhouette the same in accordance with the drawings enclosed by Douglas?

A. It was generally similar.

Q. The instruments which are shown in the drawings marked Plaintiff's Exhibit 20 is the same instrument which is illustrated in Plaintiff's Exhibit 3, plate 6, is it not?

A. Yes, it was intended that those drawings be representative of this instrument. [220]

Q. Mr. Bourns, during 1947 I believe you testified you sold 40 linear motion potentiometers to Convair, and later supplied one further linear motion potentiometer to Convair; is that correct?

A. No.

Q. Would you mind correcting me in what respects I am wrong on that?

(Testimony of Marlan E. Bourns.)

A. I don't recall the sale of one additional unit, that you mentioned.

Q. Oh, I understood you to say you had an additional unit manufactured by D. B. Millikan. Was that not sold?

A. They did make an additional unit. However, that was prior to the manufacture of the 40 pieces, and was a prototype instrument.

Q. Is that the same one that is Plaintiff's Exhibit 4?

A. That was one, and there is another one very similar to that.

Q. There was another prototype; is that correct?

A. Yes, there was.

Q. And was that made before or after Plaintiff's Exhibit 4?

A. I think it was afterward, but I am not positive which of the two prototypes was made first.

Q. Was it perhaps an instrument which was the same size as the 40 which you subsequently ordered? [221]

A. No, it was not.

Q. Was it the same size as Plaintiff's Exhibit 4?

A. A little longer, I believe.

Q. Do you have that available? A. Yes.

Q. Do you have that here? A. Yes.

Q. May I see it? A. Yes.

(The witness produced the instrument referred to.)

Q. Now, you have handed me an instrument which appears to be substantially the same as Plaintiff's Exhibit 4, and ask you if that instrument

(Testimony of Marlan E. Bourns.)

was manufactured at the same time as Plaintiff's Exhibit 4?

A. Not at the exact same time, but approximately, I believe.

Q. Does it represent an improvement on Plaintiff's Exhibit 4?

A. I think the main difference between the two instruments is that Exhibit 4 has a pivoted mounting and utilizes Bakelite material, such as is used in a production instrument, whereas the other instrument I have in my hand used a lucite lid for demonstration purposes, and it does not have a pivoted mounting, and instead has four tapped holes in the bottom.

The Court: That would not be practical, and the lucite [222] would not stand the pressure?

The Witness: No, sir.

Q. By Mr. Pruitt: In other words, it is similar to Exhibit 6, with the plastic tap that you used for demonstration purposes?                    A. Yes.

Mr. Pruitt: I will return that to you, unless Mr. Lyon wants it marked.

Mr. Lewis E. Lyon: I think since it was produced and has been referred to by the witness, it should be marked for identification.

The Court: All right.

Mr. Lewis E. Lyon: It can be marked 4-A.

The Court: Yes, 4-A, so long as it relates to the other.

The Clerk: Is this being offered, or merely marked for identification?

(Testimony of Marlan E. Bourns.)

Mr. Lewis E. Lyon: I think in order to complete the record it should be offered.

The Court: You offer it?

Mr. Lewis E. Lyon: I offer it as Exhibit 4-A.

The Court: All right. Since you are going to give it the number 4-A, it should be offered by the plaintiff. It may be received. [223]

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Q. By Mr. Pruitt: Mr. Bourns, yesterday I asked you if you would be kind enough to check your records to determine the date of the first sale of your model 114. Did you have an opportunity to do that?

A. I believe one of our employees did that.

The Court: Do you have it here today?

The Witness: Yes, I believe it is here.

Mr. Lewis E. Lyon: I have had handed to me, your Honor, what is purported to be the first invoice, that I will be glad to show counsel, showing a shipment on July 15, 1950 to North American Aviation Company. If you can read the address, you are a better man than I am. It looks like 827 North Douglas Street, El Segundo, California.

Four each Bourns linear motion potentiometers, model 114-1A, 2 inch travel. I guess that is supposed to be 2,000, but all that is legible is 200. Serial numbers 311,304,301 and 318. This is stated to me to be the first invoice for the first shipment of the 114 type of potentiometers. [246]

Q. By Mr. Pruitt: Mr. Bourns, I will show you the invoice which Mr. Lyon just described, and ask



(Testimony of Marlan E. Bourns.)

you if that does represent the first sale of the Model 114 potentiometer manufactured by you.

A. I instructed the accounting department to produce the first one, and this is the one that they produced.

Q. Now, I also asked you to check your records on the first sale of the 102 model. Would that be in this same book?

A. I don't believe it would be.

Mr. Lewis E. Lyon: If that question was asked, I missed it. They tell me they haven't checked it. Maybe they can find it here now. I will ask that an effort be made to find it. It is in the courtroom.

Q. By Mr. Pruitt: Now, Mr. Bourns, you also manufacture, do you not, a model 118 potentiometer? A. Yes.

Q. And that is one of the devices illustrated in Exhibit 3, which was introduced by your counsel; is that not correct? A. Yes, sir.

Q. Now, on or about what date was the model 118 potentiometer first sold by you?

Mr. Lewis E. Lyon: Would it help you in any of these questions, Mr. Bourns, to have these plates in front of you?

The Witness: No, I am familiar with the model, but I am not sure how accurately I can recall the date.

Q. By Mr. Pruitt: Do you know whether you have records in the courtroom which would indicate that date, Mr. Bourns?

(Testimony of Marlan E. Bourns.)

A. I don't know whether they are in the courtroom. We do have the records.

Mr. Pruitt: If counsel will undertake to get those dates on models 118 and 102, I can go to other questions, and I would appreciate it.

Mr. Lewis E. Lyon: If the material is in the courtroom, we will supply it, but I do not know that we have all the invoices in the courtroom. I don't believe that we have.

That is 102 you are asking for?

Mr. Pruitt: 102 and 118.

Q. By Mr. Pruitt: Well, model 118 was the device which we discussed yesterday concerning the Douglas specifications, was it not?

A. Yes, we discussed that yesterday.

Q. And that Mr. Goeppinger went out to discuss with Douglas engineers the configuration of that model? A. Yes.

Q. In that connection, do you know when Mr. Goeppinger went out to Douglas to discuss the configuration of that model?

A. No, I don't, but I believe I could find that out.

Q. Do you know what year it was in? Sometime in 1951, [248] was it not?

A. It probably was.

Q. Do you know what Douglas engineers discussed that matter with Mr. Goeppinger?

A. I believe it was Rex Cruze. And I can also determine that more accurately.

(Testimony of Marlan E. Bourns.)

Q. Do you know what department Mr. Cruze is in at Douglas Aircraft? A. Engineering.

Q. Do you have a model 118 of your potentiometer here, Mr. Bourns? A. Yes, I do.

Q. Will you produce that, please?

A. Yes.

(The instrument was produced by the witness.)

Mr. Pruitt: Mr. Bourns has produced, at my request, an instrument which apparently does not bear the model number, but which is otherwise identified on the cover thereof as "Bourns linear motion potentiometer patent No. 2515981, other patents pending." Part No. 8002925.

I ask that be marked as Defendants' next in order, for identification.

The Clerk: Defendants' Exhibit D, marked for identification. [249]

(The object referred to was marked Defendants' Exhibit D, for identification.)

Q. By Mr. Pruitt: Mr. Bourns, do you know when this particular model was manufactured,—this particular instrument, I mean?

A. This exact instrument?

Q. Yes. A. About a week ago.

Q. Do you know if the part number which I referred to is a Douglas Aircraft Company part number? A. Yes, it is.

Mr. Pruitt: Do we have a screwdriver that will operate on this device?

(The instrument was handed to counsel.)

(Testimony of Marlan E. Bourns.)

Q. By Mr. Pruitt: Would you mind removing the cover on that, Mr. Bourns?

A. Not at all.

Mr. Pruitt: The witness, at my request, has now removed the cover from Defendants' Exhibit D, for identification.

Q. By Mr. Pruitt: Mr. Bourns, the contact spring arms in this device are mounted on a rectangular member, are they not? A. Yes.

Q. And that rectangular member is in turn carried to [250] two fixed bars in the base?

A. It slides on two round rods in the base, yes.

Q. And do those rods support that member?

A. Yes.

Q. And they also prevent lateral deflection of that member, do they not?

A. I am not clear what you mean by lateral deflection.

Q. Well, what in this instrument prevents the contact arms from moving in a lateral direction that is—— A. A transverse direction?

Q. ——a transverse direction, yes.

A. One of the two guide rods prevents the movement by engaging a hole through the rectangular part.

Q. Very well. Now, did you make any other instrument, other than the model 118, which had fixed rods to support the carrier member for the contact plate? A. Yes, we do.

Q. What other models do you make with that feature?

(Testimony of Marlan E. Bourns.)

A. 116 and 117. Those were requested to be brought, and I requested it of our assembly department, and they informed me they did not have that available.

Q. Is it correct to say that the two models you have mentioned are dual and triple units that are otherwise substantially similar to the 118?

A. Yes, sir, that is correct. [251]

Q. Very well. I show you now, Mr. Bourns, Plaintiff's Exhibit 6, which, as I recall, is your first model linear motion potentiometer, is it not?

A. Yes, sir.

Q. And that has the feature of a round shaft protruding from one end of the case?

A. That is right.

Q. And that shaft reciprocates in the case, does it not?      A. Yes.

Q. That model has, as you can observe through the transparent cover, a slot, does it not, which is visible from the cover?      A. Yes, it does.

Q. And the member which carries the contact plate reciprocates in that slot, does it not?

A. Yes.

Q. And does the structural relationship between the member carrying the contact arms and the slot prevent transverse deflection of the contact arms?

A. Will you repeat that, please?

Q. Will you read the question, please, Miss Reporter?

(The question was read.)

The Witness: Partially.



(Testimony of Marlan E. Bourns.)

Q. By Mr. Pruitt: And the structural relationship [252] between those two members determines the limits of the shaft reciprocation, does it not?

A. I am not sure whether it does at both ends. I think it does at the extended shaft position, and at the other shaft position the shaft itself may hit on the end of the body. I can't readily determine which hits first.

Q. Could you determine that by removing the cover?

A. I might.

(The witness removes the cover.)

On inspection of the instrument with the cover removed, I find that that member does not stop the travel of the shaft in either direction. In the retracted position the shaft is stopped by the end of the shaft hitting the end of the body—the end of the hole in which the shaft is mounted in the body of the instrument, and in the extended direction it is stopped by a pin which is affixed to the shaft and abuts the end plate, which is affixed to the end of the body of the instrument.

Q. It is true, is it not, that the slot extends from the inside portion of either end plate, does it not?

A. Yes, it does.

Mr. Pruitt: Thank you. I certainly appreciate your assistance, Mr. Lyon.

Q. By Mr. Pruitt: Mr. Bourns, I show you Plaintiff's Exhibit 5, which is model 114/1, manufactured by you, and ask [253] you if it is a fact that the transverse deflection of the contact arms in that instrument is prevented by the sizing of the

(Testimony of Marlan E. Bourns.)

member on which the contact arms are mounted within the body cavity of that instrument?

A. I can't follow that explanation. I am sorry.

Q. Would you explain in your own words what prevents transverse deflection of the contact arms in Plaintiff's Exhibit 5?

A. I will have to open it to do so, I believe.

(The witness opens the instrument.)

Transverse deflection of the contact springs is primarily prevented by the post riding within a groove which has been machined within the body of the instrument.

Q. Would you say that the member which appears to be of brownish color in this instrument, and upon which the contact arms are mounted, plays no part in preventing transverse deflection of the contact arms?

A. I believe I stated that it does play——

Q. It does play a part; is that right?

A. ——a part, yes.

Q. Now, your model No. 114, as distinguished from model 114/1, which is Plaintiff's Exhibit 5, has a member which is of rectangular or square size, does it not, on which the contact arms are mounted?

A. Yes, sir, that is correct. [254]

Q. That is shown in plate 10 of Plaintiff's Exhibit 3, is it not?

A. Yes, sir. [255]

\* \* \* \* \*

Q. During 1948, Mr. Bourns, can you estimate

(Testimony of Marlan E. Bourns.)

what [280] percentage of your total sales relates to the sale of linear motion potentiometers?

A. In what way?

Q. Percentage of the gross sales dollarwise.

A. No, I can't.

Q. Do you know whether or not it represented a majority of your potentiometer sales?

A. I haven't any idea without going through the records.

Q. Would your answer be the same with respect to your 1949 sales?

A. I don't believe I have an accurate correlation as to dollar volume between one unit and another for any period of time.

Q. And you wouldn't know with respect to your 1950 sales, either?

A. No.

Q. Do you know how many—well, tell me how many different models of vane-actuated potentiometers were manufactured by you from the commencement of your operations until the middle of November, 1950.

A. You said different models, or different instruments?

Q. Different models. Would it assist you to look at your catalogues?

A. No. I think about three different models.

Q. Can you give the model numbers of those devices? [281]

A. 201 was one of them.

Q. Was 204 another one?

A. I am not sure. Generally, we would proceed

(Testimony of Marlan E. Bourns.)

201, 202, 203, and so forth, so it is probable that it would be a number such as that.

Q. I show you now Plaintiff's Exhibit 18, referring to Bulletin No. 21, which illustrates and describes a vane potentiometer model 201. That is one of the types of vane potentiometers you made; is that correct?

A. Yes, that is correct.

Q. Do you know how many of those instruments you sold during the period mentioned?

A. What period is that?

Q. From the commencement of your operation until November, 1950.

A. Oh, I could make a very rough guess, but it would not be very accurate.

Q. Do you know how it would compare percentagewise with the sales of other types of instruments made by you?

A. Percentagewise relative to quantity or dollar volume?

Q. Relative to dollar volume.

A. Over that entire period?

Q. Yes.

A. No, I certainly couldn't give that answer.

Q. Would you examine Plaintiff's Exhibit 18, and tell [282] me whether or not it shows any other vane type instruments which were sold by you during the period indicated?

A. The one on the front, I think, is the same one. I believe that is the same picture. [283]

I believe the introductory or general page here,

(Testimony of Marlan E. Bourns.)

which is the second page in the book—well, yes, right. It says it is described in bulletin 21. And bulletin 21 is the one which describes the model 201. So there are three pictures of the 201. One on the front cover, which is substantially identical to the one in bulletin 21, and one on the second page, which is a reverse view of that. That is all that is shown in this catalog.

Q. And those illustrations you referred to are substantially the same as Plaintiff's Exhibit 8, is that correct?

A. They have a bakelite lid, otherwise—the pictures show a picture with a bakelite lid, and the lid has engraving on it, otherwise it seems to be substantially the same.

Q. And was it the model 201 that was the subject of the sale to Convair pursuant to the purchase order dated January 31, 1947, five instruments?

A. I don't know whether we had assigned a model number to the instrument at that time the order was placed with us.

Q. Was it the same instrument as the one ultimately assigned model No. 201?

A. No, I don't believe it was exactly the same.

Q. I will show you Defendants' Exhibit B, another brochure, and ask you to state what vane type instruments are advertised in that document?

A. Model 204 is pictured on the reverse cover.

Q. I show you Defendants' Exhibit C and ask you if there are any vane type potentiometers advertised in that document?



(Testimony of Marlan E. Bourns.)

A. No, there are none shown in this document.

Q. Do you now manufacture a vane type potentiometer?

A. That is not currently being sold, no.

Q. Do you know whether or not it is true that you have sold more model 118 potentiometers than any other linear motion potentiometer that is manufactured by you?

A. No, I don't know whether that would be the case or not.

Depending on the limitations you specified in the first part of your question—can you repeat that? Was that all other linear motion, or any other one model of linear motion, or what?

Q. I will ask you whether or not the largest selling model of linear motion potentiometers was the model 118?

A. Then that would be comparing it with any other one model, but not all other models?

Q. Any other one model, yes.

A. That probably is our largest selling linear motion potentiometer.

Q. And do you know whether the total dollar sales of that model is greater than the total dollar sales of all other types of linear motion potentiometers manufactured by [285] you?

A. No, I certainly don't know that, especially without limitation as to time. [286]

\* \* \* \* \*

## EDMUND W. PITZER

called as a witness by the plaintiff under Rule 43(b) of the Federal Rules of Civil Procedure, being first sworn, was examined and testified as follows:

The Clerk: What is your name, please?

The Witness: Edmund W. Pitzer.

Mr. Pruitt: May I state for the record, your Honor, that Mr. Pitzer has slight difficulty in hearing, so if everybody would speak up it would be of great assistance to him. [307]

The Court: That is all right.

Mr. Lewis E. Lyon: I am glad to know that.

## Direct Examination

Q. By Mr. Lewis E. Lyon: What is your occupation, Mr. Pitzer?

A. Manufacturer of electrical instruments, and subcontractor of precision machinery.

Q. What is your training?

A. I was graduated from John Muir Technical High School, after which I worked for the C. S. Greenfield Auto Parts, after which I went to Kay & Burbank Company, another auto parts firm.

Q. In what capacity?

A. I was in charge of the stock room.

Q. After your employment by that company, what was your occupation?

A. I went to work for Otis J. Gardner Company, who did automobile motor reconditioning. I worked as a machinist.

Q. Doing what type of work?

(Testimony of Edmund W. Pitzer.)

A. All types of motor reconditioning work, re-boring, grinding, pin-fitting, turning of pistons, that type of work.

Q. Using what type of equipment?

A. Boring machines, drill presses, special grinding equipment, lathes, and special type reamers, reaming equipment. [308]

Q. Did you take a general mechanic's course at the high school that you attended?

A. No.

Q. What is that?           A. No.

Q. Any machine work at all there?

A. Not at high school.

Q. Where did you obtain any machine training?

A. I worked with my father who was in the automotive business.

Q. What type of work did you do in high school, what type of course did you take?

A. I took primarily mathematics.

Q. After you left this automotive company, what type of work were you engaged in?

A. I went to Lawson Time, manufacturers of electric clocks.

Q. Where?

A. South Fair Oaks in Pasadena.

Q. What did you do there?

A. Well, there were just two of us, so we had to do pretty near everything.

Q. All right. Now, what was pretty near everything?

(Testimony of Edmund W. Pitzer.)

A. We had to do the machine work, assemble, and test the clocks. [309]

Q. What do you mean by test clocks?

A. Well, there was really not much to the testing; it was primarily letting the clock run for a period of time.

Q. What did you mean by the machine work?

A. Drilling, tapping, lathe operations.

Q. What did you mean by the assembly?

A. Well, the various components had to be assembled.

The Court: I presume after you stamped out the various parts you put them together, is that true?

The Witness: That is true.

Q. By Mr. Lewis E. Lyon: How long were you in that occupation?

A. I was there for approximately a year and a half.

Q. All right. Then where did you go, and by whom were you employed?

A. Hanglighter Manufacturing Company.

Q. I didn't get the name.

A. Hanglighter.

Q. Located where?

A. On South Raymond.

Q. In Pasadena? A. Right.

Q. In what business was that company?

A. They manufactured piston rings.

Q. And you were employed there as a machinist? [310] A. No, sir.

(Testimony of Edmund W. Pitzer.)

Q. In what capacity?

A. I was in the stock department.

Q. And your occupation there was to take care of the stock, is that correct?

A. That is correct.

Q. How long did you stay in that employ?

A. About one year.

Q. Then by whom were you employed?

A. William Miller Corporation.

Q. What was the business of that company?

A. They manufactured scientific instruments.

Q. Where? A. 363 West Colorado.

Q. Pasadena? A. Pasadena.

Q. And in what capacity were you employed by that company?

A. I was an instrument maker.

Q. What do you mean by an instrument maker?

A. Well, we machined parts for these various instruments, oscillograph and vibration strain equipment.

Q. What do you mean by machined parts for them? What parts did you machine?

A. There are many components to these instruments; [311] We machined any and all.

Q. And what type of machines did you use? A lathe?

A. We used a lathe, drill press, milling machines, tapping machines, grinders.

Q. That was general machine work, then, was it not? A. Yes, of a high caliber.



(Testimony of Edmund W. Pitzer.)

Q. All right. How long were you with the Williams Company?

A. I was there one year.

Q. Then by whom were you employed?

A. D. B. Millikan Company.

Q. What was the business of that company?

A. They sorted aircraft rivets mechanically and automatically.

Q. Did they have any other business?

A. Yes, they went into lawn furniture; they also made an orange juice dispenser. They were in jewelry.

Q. And what were your duties with that company—Machinist?

A. I had the title of production engineer.

Q. Now, let's say what you did. Did you operate the machines?

A. No, sir.

Q. Not at all?

A. No, sir. [312]

Q. What did you do?

A. I had charge of producing the machines that were used to sort these rivets.

Q. How long did they remain in the rivet sorting business?

A. Approximately five years.

Q. How long were you with them?

A. Five years.

Q. During what years was this employment?

A. 1941 to 1947 with a term of service in between.

Q. What time in 1947?

(Testimony of Edmund W. Pitzer.)

A. Actually, I guess it was 1948, February of 1948.

Q. During that period of time prior to February of 1948 was the company engaged in the rivet sorting business up until February of 1948?

A. No, sir.

Q. How long before February of 1948 did they stop their rivet sorting business?

A. I would say in 1946.

Q. In the latter part of 1946 was that company engaged primarily in the lawn furniture business?

A. Yes, I think it was.

Q. During that period of time—up until that period of time had you ever had any occupation dealing with the manufacture, production of a potentiometer? [313]

A. No, sir.

Q. When did you first become acquainted with the manufacture of a potentiometer?

A. The actual manufacture of a potentiometer?

Q. Yes. A. In 1947, I believe.

Q. And what time in 1947?

A. I think towards the middle of the year.

Q. Did you meet any particular individual connected with this matter at that time?

A. Yes.

Q. Who? A. Mr. Bourns.

Q. Where?

A. At the D. B. Millikan Company.

Q. Did Mr. Bourns come to that company to have something made at that time?

A. Yes. Well, at first there was just discussion.

(Testimony of Edmund W. Pitzer.)

Q. And what he brought there to discuss having made was a potentiometer, was it not?

A. That's right.

Q. And as a result of that discussion did the Millikan Company undertake to manufacture parts or to manufacture a potentiometer for Mr. Bourns?

A. After some design work was done. [314]

Q. Were you the party in the Millikan Company with whom Mr. Bourns discussed his desire to have a potentiometer made there?

A. I think I was there at the meeting. There were others.

Q. Who were the others?

A. Mr. Gobel and Mr. Millikan.

Q. How long did the Millikan Company continue in the business of fabricating parts or potentiometers for Mr. Bourns, to your knowledge?

A. I think the latter part of '47.

Q. Did you continue to work with Mr. Bourns after that date in the fabrication of parts or the completion of potentiometers after the Millikan Company association was concluded?

A. Would you repeat that again, please?

Q. Did you continue, after the Millikan Company quit, with either making of parts or the making of entire potentiometers for Mr. Bourns?

Mr. Pruitt: I don't understand that question.

Q. By Mr. Lewis E. Lyon: You say the Millikan Company——

The Court: Start in with when he went to work

(Testimony of Edmund W. Pitzer.)

and how long he stayed with them, and then he will understand it.

Q. By Mr. Lewis E. Lyon: When did you start working [315] for Mr. Bourns away from the Millikan Company? A. Sometime in '47.

Q. Was that before the Millikan Company concluded its association with Mr. Bourns?

A. That I don't know.

Q. You were still at the Millikan Company when Mr. Bourns quit having potentiometers made there, weren't you?

A. Would you repeat that?

Q. I say you were still at the Millikan Company when Bourns stopped having parts made by the Millikan Company, weren't you?

A. I think so.

Q. All right. Then when was that?

A. Late '47.

Q. Prior to the time that Bourns stopped having parts or complete potentiometers made by the Millikan Company, you were also working part time on the outside for Mr. Bourns making potentiometers, were you not? A. I did.

Q. Where? A. At my home.

Q. On your own? A. In my garage.

Q. On your own? A. Yes. [316]

Q. How come that business was not given to the Millikan Company for whom you were employed? A. They did not require it.

Q. Did they know about it?

A. I think so.

(Testimony of Edmund W. Pitzer.)

Q. Why do you think so?

A. Because I believe I told them.

Q. I see. How long did you continue working in your garage and making these parts for Mr. Bourns?

A. The only part that I can remember making is that small potentiometer that Mr. Bourns described, and I think that probably was over a period of probably two weeks, or something like that; maybe more.

Q. What part are you speaking of?

A. Well, it was a prototype miniature potentiometer.

Q. Is it illustrated by one of these exhibits here in the courtroom?      A. It is.

Q. Which one?

The Court: Step down if it is easier for you to identify it.

The Witness: It is in one of these catalogs.

Q. By Mr. Lewis E. Lyon: I say, is it represented by one of these models?

A. Oh. No, it is not. [317]

Q. All right. Can you point it out in the catalog, then?      A. This one (indicating).

Q. You are referring to the structure which is illustrated on page—well, the page marked “Bulletin No. 91,” is that correct?

A. Yes, sir.

Q. Of Exhibit 18.

That is the only work that you recall doing for Mr. Bourns in your own garage, is that correct?



(Testimony of Edmund W. Pitzer.)

A. I believe that is correct.

Q. And that extended over a period of about two weeks or two weeks and a half, is that correct?

A. I think so.

Q. And that is total elapsed time that we are speaking of, not that you worked all that time all the time for two weeks, but——

A. I think so.

Q. Then did you work for Mr. Bourns at any other place?      A. At his garage.

Q. In what?      A. In his garage. [318]

Q. Where was that located?

A. On Highview in Altadena.

Q. Was that also a part time employment?

A. No. Oh, I think probably I did, yes.

Q. For how long?

A. I would imagine a month to six weeks.

Q. Were you still working for the Millikan Company at that time?      A. Yes.

Q. For the entire period of a month or six weeks?      A. On Saturdays.

Q. I am not asking you on what day you state you were working for them. You state you were working part time, and I am trying to find out if that part time employment continued,—your employment by the Millikan Company, continued throughout the period of the part time employment?      A. It did.

Q. All right. Did you continue to work for the Millikan Company after about that six weeks of part time employment?

(Testimony of Edmund W. Pitzer.)

A. I think after that I went to work for Mr. Bourns.

Q. And do you know when that was?

A. February of 1948.

Q. What do you mean by that, February 1, 1948?      A. Approximately.

Q. If the record shows January 31, 1948, that would [319] still be within your estimate, would it?

A. Yes.

Q. When you were working part time for Mr. Bourns in his own garage, what did you do there?

A. I was doing assembly work.

Q. Assembly of parts made somewhere else?

A. Yes.

Q. Where?

A. I think Wottring Company.

Q. What were you assembling?

A. I think at that time the vane units.

Q. Anything else?

A. I couldn't be sure.

Q. Did you do any machine work in Mr. Bourns' garage?

A. I don't believe so. I don't believe he had any equipment at that time.

Q. Did you continue to do any machine work in your own garage during that period of time?

A. I may have.

Q. Did you have any machine equipment at that time?      A. Yes.

Q. What?      A. I had a lathe.

Q. What type of lathe?

(Testimony of Edmund W. Pitzer.)

A. A bench type. [320]

Q. What size? A. A 12-inch.

Q. A 12-inch. What make?

A. I beg your pardon. That was a 10-inch Atlas.

Q. Did you have any other equipment besides the 10-inch Atlas?

A. I had a Walker-Turner Drill Press.

Q. What size? A. 15-inch.

Q. Floor or bench? A. Bench.

Q. Any other equipment?

A. Oh, hand tools.

Q. No other machine tools?

A. That's right.

Q. What type of machining did you do for Mr. Bourns? A. At what period?

Q. During this period of part time employment.

A. I don't believe I did any at that time.

Q. You don't believe that you did any during this period of part time employment which extended over a period, as you state, of about six weeks, is that correct,—no machining at all?

A. No, I couldn't be sure about that.

Q. When did you first start to try to wind elements for [321] Mr. Bourns?

A. I would think about three or four months after I went to work for Mr. Bourns.

Q. Was that still in Mr. Bourns' garage?

A. Yes.

Q. Did he have a lathe in his garage at that time? A. Yes.

Q. What type of lathe?

(Testimony of Edmund W. Pitzer.)

A. A bench lathe.

Q. What make? A. A South Bend.

Q. What size? A. 9-inch.

Q. Now, is it your testimony that up to the period of January 31, 1948, in that three months period, that Mr. Bourns acquired that lathe, or was it there when you went there?

A. He acquired the lathe.

Q. During that period of time?

A. Yes.

Q. And when, after your start of employment there?

A. I would think approximately two months after.

Q. Now, when you started to wind the elements, it was necessary, was it not, to change the gear timing of that lathe, in order to produce a satisfactory winding operation? A. Yes. [322]

Q. And in order to do that you purchased certain equipment, did you not?

A. Just extra gears.

Q. What is that? A. Extra gears.

Q. What were those extra gears?

A. By that what do you mean: "What were those extra gears?"

Q. Well, they changed the gear ratio, did they not? A. They did.

Q. And what was the gear ratio that they changed to?

A. Well, I wouldn't know on that. That is pretty complicated. There is a whole chain of gears in a

(Testimony of Edmund W. Pitzer.)

lathe, and it is very common to change them, and in order to change them you just put in your gears with different numbers of teeth.

Q. All right. Now, do you recall what number of teeth that the special gears you purchased had?

A. I think some—one was a 16-tooth gear, one an 18, a 20, and possibly a 24.

Q. Now, was this a 9-inch South Bend quick-change type of lathe that Mr. Bourns purchased?

A. Yes.

Q. And I presume, then, that these 16, 18, 20 and 24-tooth gears that you obtained were to change the fixed gear ratio of that quick-change drive; is that correct? [323]

A. Yes.

Q. They were in addition to the gears which were assembled in the quick-change mechanism of the 9-inch South Bend lathe; is that correct?

A. Well, they were not exactly in addition. They replaced——

Q. They were replacements?

A. Of a gear that was already there.

Q. All right. Now, you determined by this set of four gears, 16, 18, 20 and 24-tooth gears, by replacement of the more or less tooth gear, what your winding speed for the spindle of the lathe was in the winding of these elements, did you not?

A. It is not always possible from the quick-change position to get the feed per turn that you wish, and that is what we were changing.

Q. And you bought four separate gears so that



(Testimony of Edmund W. Pitzer.)

you could find out what was the right speed for that spindle, did you not?      A. Yes.

Q. And you determined that one of those gears gave you the right speed,—by replacing one of the 16, 18, 20 or 24-tooth gears, one of them gave you the right speed for a particular size element, did it not?

A. Well, normally, it would be that you would change [324] the gear, and then probably change the gear box several times in order to get the correct feed.

Q. I see. And you determined through that experimentation a correct speed of the drive of the spindle or chuckbox holding the card or element which was being wound, didn't you?

A. We obtained a correct feed, regardless of the speed of the spindle.

Q. I see. Your longitudinal feed speed you determined correctly, for a particular speed of the spindle, then; is that correct?

A. No, for a particular size of wire.

Q. For a particular size of wire. Now, about how heavy were these wires?

A. It varied anywhere from about one-thousandth to four or five.

Q. And what was the most common size that you used at that time?

A. I think about one and one-half.

Q. One and one-half thousandths?

A. Yes.

(Testimony of Edmund W. Pitzer.)

Q. How does that compare with the size of a human hair, do you know?

A. About three-quarters of the size.

Q. That is, the wire was about three-quarters of the [325] size of human hair, or the other way around?

A. No, the wire is about three-quarters of the size of a human hair.

Q. Now, what was the correct feed speed determined by you for that size wire?

A. I wouldn't have the faintest idea.

Q. You don't have any idea at the present time?

A. No, sir.

Q. All right. Do you know what it was for any particular size or for a gauge of wire that you were using, and determined at Mr. Bourns' Laboratories?

A. We usually just changed the ratio until the wire wound right. [326]

\* \* \* \* \*

Q. By Mr. Lewis E. Lyon: I have been handed a file of this North American shipment, and ask you if you can identify the same?

A. Yes, sir, it is a purchase order from North American to rework three 114-2 potentiometers.

Q. And this is the entire file of that transaction, is it, in your possession?

A. I think so.

Mr. Lewis E. Lyon: I will ask that this file of papers be marked at the present time for identification as the Plaintiff's Exhibit 27 for identification.

The Court: All right.

(Testimony of Edmund W. Pitzer.)

The Clerk: So marked.

(The exhibit referred to was marked Plaintiff's Exhibit 27, for identification.)

Q. By Mr. Lewis E. Lyon: When an instrument is returned to you for repair, rechecking or for some other [345] reworking, by one of these customers, it is always sent back to you either with a debit note showing that they have debited your account, so that they are not paying for the particular instruments returned, or for reworking with an invoice that says, "Rework without charge," isn't that true?

A. I don't pay very much attention to that sort of thing, so I don't know.

Q. You don't know?           A. No.

Q. You know that instruments are returned to you for reworking, don't you?

A. Yes. [346]

Q. And for repair?           A. Yes.

Q. And you say you don't know, when that is true, how the financial transaction is handled; is that correct?

A. Sometimes they are sent back without any paperwork.

Q. Just for you to rework them?

A. Yes.

Q. Do you make any charge for reworking?

A. Sometimes. Sometimes not.

Q. What determines the fact?

A. Well, whose responsibility it is.

Q. And if the customer believes that it is your

(Testimony of Edmund W. Pitzer.)

responsibility, they don't pay for the reworking, do they?       A. That's right.

Q. And when an instrument is sent back to you with paperwork from the customer, that paperwork indicates who they think is responsible for the error, does it not?       A. Usually.

Q. Now, I am going to show you a portion of Exhibit 27, for identification, which happens to be what you call the order which was originally dated July 16, 1951; that is correct, is it not?

A. Yes.

Q. Now, that paper came to your plant at that time, on July 16, 1951, when merely the portion filled in in that [347] says, "1 3 only 114-2 potentiometers—linear motion in accordance with Bourns Dwg. 114-1A NPA priority rating DO-A1 is extended & certified under NPA Reg. No. 2 as amended," with a further description of the structure, and carrying an extended column with the words, "No Charge." That is true, is it not?

Mr. Pruitt: Your Honor, I will object to the question on the grounds that it is an inaccurate recital of what the document shows. The document shows that the original document is dated June 26, 1951, and is on the bottom of this stack of papers, and it does not say, "No charge" in the column to the right. On the contrary it says, "Price to be negotiated."

Mr. Lewis E. Lyon: Well, I am speaking of this particular one, and it has the extension "No charge," does it not?

(Testimony of Edmund W. Pitzer.)

The Witness: Right.

The Court: Overruled.

Q. By Mr. Lewis E. Lyon: And that is the way these papers came to you when there was a reworking requested which the customer thought was your instrument and was your responsibility?

A. I didn't think it was our——

Q. I am speaking of a general practice now. You received that kind of an instrument back from the customer [348] with your devices when they thought that the reworking was up to you, because it was your responsibility? That is the way you generally receive those items, isn't it?

A. I think you will note here at the time——

Q. Just a moment. Just answer that question, please.

A. Yes.

Q. All right. Now, on that same instrument, under a subsequent date of August 13, 1951, it shows a change from that condition and a realization, in which it says, "Delete No Charge," and putting in the charge; isn't that true?

A. Right.

Q. So that between the period of July and August the customer, in this case North American, realized that an error had been made; isn't that true?

A. I am not sure of that.

Q. Under date of August 13, 1951, they sent you an amended piece of paper, didn't they?

A. Here, is it?

Q. August 13, 1951, here on the bottom of this (indicating).

A. Yes, sir.



(Testimony of Edmund W. Pitzer.)

Q. And from the face of that amended document it shows that there was an error in the "No charge" entry of July 16, 1951, doesn't it?

A. Right. [349]

Mr. Pruitt: I will object to that, your Honor. The document speaks for itself.

The Court: I don't know what this thing is leading to. I don't know what it is all about.

Mr. Lewis E. Lyon: It is only this, your Honor: A very great point was made when the argument was made that there was no evidence of confusion, there was no sending of one person's products to the other, on the proposition of confusion. This shows that fact.

The Court: Then it isn't a question. Then the fact, which appeared yesterday, that inquiries were directed to them for instruments which were not theirs is a matter on which an argument may be based. But all this hullabaloo about who put on the charge, and whether the customer did this or that, doesn't tend to prove or disprove that.

Mr. Lewis E. Lyon: Only on this proposition, your Honor, that this witness states, or he attempted to testify, that the customer knew when he sent these instruments to them that they were not their instruments, but they were sent to them because of a certain fact which, in my opinion, is contrary to what is shown from the face of the documents.

The Court: I don't think that is material. I don't think you ought to put in your case in a lop-

(Testimony of Edmund W. Pitzer.)

sided manner. He has admitted certain conditions, and you can produce other evidence on the confusion of source. This is putting [350] your case in in a lopsided manner, to put a man on and keep him on cross examination for two or three days, asking him leading questions. And he is not a very clever witness, because his answers show conclusively that he deliberately went about to imitate this, that he had no knowledge in this field, that he only went in and went from a stockman to a mechanic, that he didn't know scientific electricity, and all that. You have already established that.

Mr. Lewis E. Lyon: Then I will just offer in evidence these documents in this file.

The Court: 43-B is not made for an exercise in forensics.

Mr. Lewis E. Lyon: I appreciate that. We are not doing that.

The Court: Well, today you have been doing nothing else.

Mr. Lewis E. Lyon: Well, I will offer in evidence Plaintiff's Exhibit 27, for identification, as Exhibit 27.

The Clerk: Is this admitted, your Honor?

The Court: Yes, it may be received.

The Clerk: 27 in evidence.

(The document marked Plaintiff's Exhibit 27, for identification, was received in evidence.)

The Court: You don't gain anything by having someone make an admission, and then contradict it. Put on your positive testimony, and then let him

(Testimony of Edmund W. Pitzer.)

come back and contradict it. Otherwise I get his defense before I get your complete [351] case, because you are not bound by his testimony, and he himself is. A lot of 43(b) examination is just a waste of judicial time. [352]

\* \* \* \* \*

Q. Did you take a prototype of a potentiometer with you to Douglas when you called on them in December of 1950? A. Yes.

Q. Will you point out from Exhibit 3 just which instrument, potentiometer, that was a prototype of? A. This is one here.

Q. You are referring to plate 16 of Exhibit 3. You say "This is one"; did you have more than one? A. I think I had two.

Q. All right. What was the second?

A. I don't believe I see one here. [354]

Q. Have you an illustration of that second one anywhere? A. I do not know.

Q. Was that second one given subsequently a model number by Edcliff Laboratories?

A. It was on the order of a "B."

Q. On the order of a "B." Now, we have several B's in Exhibit 3. On plate 12 there is B-P; was it similar to that?

A. It was similar to that.

Q. Plate 12 of Exhibit 3, is that correct?

A. Yes.

Q. Was it different in any respect?

A. It had a different type of contact than shown there.

(Testimony of Edmund W. Pitzer.)

Q. You mean the contact plate which is numbered 67, is that correct? A. Right.

Q. What was the difference in that contact?

A. It was similar to 67 on plate 16.

Q. You mean the contact was similar to the contact shown at 67 on page 16, which is marked Edcliff model AP-2, is that correct?

A. A-P2, yes.

Q. Was it similar in any other respects to A-P2, [355] plate 16 illustration?

A. I don't think so.

Q. What in the Edcliff manner of numbering these different models does the letter "P" mean?

A. That is a new one to me. I have never seen that "-P" number.

Q. As far as you know, does that mean prototype? A. It doesn't mean anything to me.

Q. It doesn't mean anything to you.

I am going to ask you to look at these different Edcliff models in Exhibit 3 and advise me as to whether or not the plate 6 is a fair illustration of your model D potentiometer? A. Yes.

Q. Now, is plate 8 a fair illustration of your model No. A-P1 potentiometer?

A. The P1, I do not recognize.

Q. Is it a fair representation of your model A potentiometer?

A. The contacts are not correct.

Q. What is wrong about the contacts?

A. The contacts should be very narrow.

Q. Very narrow. That is, your statement is that

(Testimony of Edmund W. Pitzer.)

there is too much area of contact between the contact and the wire element shown?

A. No. It is much too wide, the contact spring [356] itself is much too wide.

Q. Have you a sample of this A model potentiometer in court?           A. I think we do.

Mr. Lewis E. Lyon: I ask to see it, then.

Mr. Pruitt: I will state for the record at this time, your Honor, that at the time of inspection of Defendants' models by the plaintiffs these stickers marked A-P1 were placed on there by the person representing the plaintiff, to designate that particular instrument.

The Court: All right.

Q. By Mr. Lewis E. Lyon: This instrument which has been handed to me, and which has a sticker on it, I don't mean to imply, because I don't know, whether you put it on there or someone else, A-P1, is a model of Model A potentiometer of the defendant which you referred to, is it?

A. Yes.

Mr. Lewis E. Lyon: I will ask that this model be received in evidence as Plaintiff's Exhibit 28.

The Court: It may be received.

The Clerk: Plaintiff's Exhibit 28 received in evidence.

(The exhibit referred to was marked Plaintiff's Exhibit 28 and was received in evidence.)

Q. By Mr. Lewis E. Lyon: Now, I will refer you to plate No. 11, which is a purported illustra-



(Testimony of Edmund W. Pitzer.)

tion of Edcliff [357] Model B; is that a fair drawing that structure?       A. Yes.

Q. Now, I refer you to plate No. 12 of Exhibit 3, and ask you if that is a fair illustration of the Edcliff B potentiometer?

A. It is very similar to a B1.

Q. To a B1?       A. Yes.

Q. Does it materially differ from a B1 in any way?       A. In the contact, again.

Q. You mean in the width of the contact?

A. Right.

Q. In the illustration of the physical width of the contact?       A. That's right.

Q. And that is the only way?

A. I think so.

Q. Now, referring to plate No. 14, is that a fair illustration of an Edcliff model potentiometer?

A. I think so.

Q. What model is that?

A. I don't believe there was any model assigned to that.

Q. You mean any number assigned to it?

A. I don't believe there was any model letter or [358] number assigned to it.

Q. But it is an illustration of an Edcliff model potentiometer made by the defendant, is that correct?       A. Yes.

Q. Now, referring to plate No. 16 of Exhibit 3, does that plate correctly illustrate a model of a potentiometer manufactured by the Edcliff Laboratories?

(Testimony of Edmund W. Pitzer.)

A. Well, it is a little incorrect.

Q. A little incorrect where?

A. Well, I think that this does not abut this or come tangent to this point right here (indicating).

Q. You mean that you believe that the part that is marked 64, which I will refer to as the shaft, does not lie flat against the base which is marked 61, is that correct?      A. That is correct.

Q. Have you that model here?

Mr. Pruitt: I have it here, if you want it.

The Witness: I think so.

Mr. Pruitt: This was also placed on it at the time of inspection. It is a partial instrument.

Q. By Mr. Lewis E. Lyon: This is the model which you referred to, is it, Mr. Pitzer?

A. Yes.

Mr. Lewis E. Lyon: I will ask that this model be marked as Plaintiff's Exhibit No. 29. [359]

The Clerk: For identification?

Mr. Lewis E. Lyon: I will offer it in evidence as Plaintiff's Exhibit 29.

The Clerk: Is this admitted, your Honor?

The Court: It may be received.

The Clerk: Plaintiff's Exhibit 29 in evidence.

(The exhibit referred to was marked Plaintiff's Exhibit 29, and was received in evidence.)

Q. By Mr. Lewis E. Lyon: I refer you to plate 17 of Exhibit 3, and I will ask you if that plate is a fair drawing of an Edcliff potentiometer manufactured by your company?

A. The bushing here is incorrect.

(Testimony of Edmund W. Pitzer.)

Q. Now, you have referred to a part on plate 17 of Exhibit 3, which I believe is shown in pink and it immediately surrounds the shaft 64?

A. Right.

Q. And you have referred to that as a bushing, is that right?           A. Right.

Q. And that is incorrect in what respect?

A. Instead of one bushing, it is two bushings.

Q. It is divided into two spaced bushings, is it?

A. That is correct.

Q. And they are spaced apart longitudinally of the [360] shaft 64, is that correct?

A. That is correct.

Q. In other respects the drawing is correct, is that right?

A. Well, there is no cables shown for electrical connections.

Q. You mean no cables shown—do you have a model L potentiometer here?           A. Yes.

Q. There has been a device handed to me which is entitled “Edcliff Part No. 4394-500124 Ser. No. 123”; I will ask you if that is the model L potentiometer to which you refer?           A. Yes.

Mr. Lewis E. Lyon: I will offer this potentiometer just produced in evidence as Plaintiff’s Exhibit 30.

The Court: It may be received.

The Clerk: 30 in evidence.

\* \* \* \* \*

Q. By Mr. Lewis E. Lyon: Referring to plate 19 of Exhibit 3, does that plate correctly illustrate

(Testimony of Edmund W. Pitzer.)

a potentiometer manufactured by the Edcliff Laboratories, defendant?      A. Yes.

Q. Referring to plate 20 of Exhibit 3, does that plate [361] correctly illustrate a potentiometer manufactured by the Edcliff Laboratories, defendant?      A. Yes.

Q. Referring to plate 22, does that plate correctly illustrate a potentiometer manufactured by defendant Edcliff Laboratories?

A. No, it does not.

Q. In what respect is that in error?

A. I don't believe that this type of continuity spring was used.

Q. You are referring to the element therein numbered 31?      A. 31.

Q. What type of continuity spring was used?

A. There was a shorting bar used.

Q. Have you a sample of the Edcliff model C-1 in court?

Mr. Pruitt: I don't, Mr. Lyon.

Q. By Mr. Lewis E. Lyon: Have you such a sample?      A. I do not know.

Q. You do not know whether one is in existence or not?      A. That is right.

Q. Except for the type of continuity spring or contact bar, one of which is replaceable for the other, and indicated at 31, is the drawing correct?

A. No.

Q. In what other respects?

A. The bearing recesses. One was in the cover, one in the base.

(Testimony of Edmund W. Pitzer.)

Q. I see. The bearing which then is illustrated as recessed in the yellow part in 22, instead of being contained in a recess in that yellow part was positioned in a recess in the double line part which is uncolored, is that correct?

A. That is correct. [363]

Q. And the shaft spanned completely from the cover to the base, then?

A. That is correct.

Q. In other respects is the drawing correct?

A. No.

Q. In what other respects is it in error?

A. There was a magnet incorporated in it.

Q. A magnet? A. Yes.

Q. Where?

A. Well, this portion in green is incorrect also. There was a flat disc with a magnet, that had a slot in it, that the disc was rotated in.

Q. Have you a correct drawing of that model C-1 structure? A. I do not know.

Mr. Lewis E. Lyon: I believe there is a purported drawing in the Defendants' trial brief of a C-1 potentiometer. May I see the trial brief, please, that was filed in the court?

The Court: It is probably bound in there. Here is a loose copy, where you will probably find it easier.

Mr. Pruitt: There is only a C-3 and C-2, I believe, in there, Mr. Lyon.

Mr. Lewis E. Lyon: No C-1 here? [364]

Mr. Pruitt: No C-1.



(Testimony of Edmund W. Pitzer.)

Mr. Lewis E. Lyon: If there is no C-1, there is no use in my looking for it.

The Court: Yes, counsel ought to know what he has in his brief.

Mr. Lewis E. Lyon: Yes, that is what I think.

Q. By Mr. Lewis E. Lyon: Does this drawing of plate 22 correspond with a C-3 Edcliff model,—the one that is marked on plate 22? A. Yes.

Q. Oh, I see. Then our error is in the number. That should be a C-3 instead of a C-1; is that correct? A. Correct.

Q. Otherwise plate 22 illustrates a C-3 model of an Edcliff instrument? A. Right.

Q. And a full and more comprehensive drawing of the C-3 instrument is found in the 156-page pretrial memorandum of the defendants; is that correct? A. I think so.

Q. Would you point it out to me?

Mr. Pruitt: May I have the question read, please?

(The record was read.)

The Witness: It is on page 69-A.

Q. By Mr. Lewis E. Lyon: Does this drawing on page [365] 69-A correctly illustrate the C-3 potentiometer manufactured by the Bourns Laboratories—I mean by the Edcliff Laboratories? Pardon me. A. Yes.

Q. Now, there is included also in the pretrial memorandum of the defendants a drawing of a C-2 model Edcliff potentiometer, is there not?

A. Yes.

(Testimony of Edmund W. Pitzer.)

Q. And that is set forth on page 75-A of that pretrial memorandum, is it not? A. Yes.

Mr. Lewis E. Lyon: I wonder if the defendants' counsel has further prints of these two drawings? I do not want to strip anybody's pretrial memorandum, but I would like to place prints of those in evidence, and they are not in evidence by being in a memorandum.

The Court: Have you loose copies of those?

Mr. Pruitt: I don't have them with me, your Honor, but I can certainly produce them at the next session and will be glad to.

The Court: Suppose you give them a number, then, and when we meet on Monday or Tuesday, whichever day we decide on, why, they can be supplied.

Mr. Lewis E. Lyon: All right. I would like to offer in evidence as Plaintiff's Exhibit 31 the drawing, a duplicate [366] of which appears on 69-A of the defendants' trial memorandum.

The Court: All right. It may be received.

Mr. Lewis E. Lyon: And as Plaintiff's Exhibit 32 a print of the drawing, a duplicate of which appears upon page 75-A of the defendants' trial memorandum.

The Court: All right. Copies will be supplied?

Mr. Pruitt: Yes, your Honor.

The Court: They may be received.

The Clerk: 31 and 32 in evidence.

(Testimony of Edmund W. Pitzer.)

(The documents referred to were marked Plaintiff's Exhibits 31 and 32 and were received in evidence.)

[See Book of Exhibits.]

Q. By Mr. Lewis E. Lyon: In the trial memorandum there are drawings of Edcliff B-11 and B-12 linear motion potentiometers, I believe. Are you familiar with those drawings? A. Yes.

Q. Will you point those out to me, please, from the trial memorandum?

Pages 37-A and 38-A, Mr. Witness. I couldn't locate them quickly either. I thought you could do it quicker than I could.

37-A is a drawing of what? A. Of B-11.

Q. And by "37-A", of course, I am referring to the page of that number of the pretrial memorandum of the defendants. [367] Does that drawing show a potentiometer actually manufactured by the defendants? A. Yes.

Q. Was the instrument manufactured before or after that drawing date? A. After.

Q. I see. Then the instrument has only been manufactured after May 27, 1954; is that correct?

A. Yes.

Q. And has any such instrument as that been sold? A. Yes.

Q. When? A. I think in June.

The Court: I didn't hear the answer.

Mr. Lewis E. Lyon: He said, "I think in June."

The Court: Oh, in June. It would be, because it is less than 60 days. Today is the 25th.

(Testimony of Edmund W. Pitzer.)

Q. By Mr. Lewis E. Lyon: Can you say to whom it was sold?

A. I don't know—oh, it was North American.

Mr. Lewis E. Lyon: I will ask if the defendants have a further print of this 37-A drawing, because I would like to offer the same in evidence.

Mr. Pruitt: I will make the same offer as I made before. I will produce loose copies of it at the next session. [368]

The Court: All right. It may be given a number, and the loose copy supplied.

The Clerk: Plaintiff's 33 in evidence.

Mr. Lewis E. Lyon: I will ask that the drawing appearing on page 37-A of the trial memorandum be received in evidence as Plaintiff's Exhibit 33, and that a loose copy be substituted for the one appearing in the trial memorandum.

(The drawing referred to was marked Plaintiff's Exhibit 33, and was received in evidence.)

[See Book of Exhibits.]

Q. By Mr. Lewis E. Lyon: Now, similarly with respect to the drawing appearing on page 38-A, does that drawing likewise appear in full upon a drawing of the character of the drawing appearing upon page 37-A? A. Yes.

Q. That is, what is on page 38-A is cut out of a complete drawing, having the title plate on it—

A. Yes.

Q. —of page 37-A? A. Yes.

Q. Now, this drawing on 38-A is a drawing of an actual instrument manufactured by the Edelfiff

(Testimony of Edmund W. Pitzer.)

Laboratories, is it?           A. Instruments.

Q. —instruments?           A. Yes.

Q. Has such an instrument actually been sold by Edcliff [369] Instruments?           A. Yes.

Q. When?           A. I think in June.

Q. In June. Is this drawing which appears on page 38-A of the trial memorandum a drawing which was made on or about May 27, 1954?

A. I think so.

Q. And that instrument appearing upon page 38-A is the so-called B-12 linear motion potentiometer, is it?           A. Right.

Q. And that likewise was sold to North American Aviation?           A. Yes.

Mr. Lewis E. Lyon: I will ask that a duplicate of the drawing appearing upon page 38-A of the trial memorandum be received in evidence as Plaintiff's Exhibit 34.

The Court: All right. It may be received.

The Clerk: 34 in evidence.

(The drawing referred to was marked Plaintiff's Exhibit 34, and was received in evidence.)

[See Book of Exhibits.] \* \* \* \* \*

The Court: Before you went to the Bourns Laboratories, you had not done any work in this particular field of these particular instruments with which we are concerned in this [371] law suit; isn't that true?

The Witness: That is true.

The Court: And whatever knowledge you acquired, you acquired while working for them?



(Testimony of Edmund W. Pitzer.)

The Witness: Not entirely, sir.

The Court: Well, what——

The Witness: I was in the Service, and I had considerable experience in electronics.

The Court: How long were you in the Service?

The Witness: I was in for 10 months.

The Court: As to these particular devices, whatever knowledge you had, you acquired from them, isn't that true, by applying your previous experience? I am not trying to deprive you of the benefit of your experience, because evidently you became a very valuable man, and they wanted to keep you. But you didn't know anything about these particular devices until you went to work for them, did you?

The Witness: Well, they are very similar to a standard rotary pot——

The Court: Yes.

The Witness: ——which is used throughout the industry.

The Court: But you were not engaged in the sale or manufacture of any comparable products——

The Witness: No, I was not.

The Court: ——before you went to work with them? You [372] had all sorts of mechanical skills which you applied at various times, ranging from being a stock man to other things relating to an entirely different field, didn't you?

The Witness: That is true.

The Court: All right. \* \* \* \* \* [373]

## HERBERT E. KIDDER,

called as a witness by and on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

## Direct Examination

Mr. Lewis E. Lyon: Knowing full well your Honor's position with respect to this case and patent experts in general, but for the purpose of establishing a record of some form, I am endeavoring to make it as short as possible, particularly with respect to Exhibit 3, and I am calling the next witness, I might say with an apology, because I am sure that your Honor does not need what we are going to produce.

The Court: If the man is a scientist, I am always glad to hear him.

Mr. Lewis E. Lyon: I mean I am calling a patent expert at the present time.

The Court: I beg your pardon? As I say, if a man is a scientist in the field, I am willing to have it, but often they call a patent attorney, who is merely an advocate, and he does not help the court.

By Mr. Lewis E. Lyon:

Q. Will you state your name?

A. Herbert E. Kidder.

The Clerk: Just a moment. How do you spell your last [395] name?

The Witness: K-i-d-d-e-r.

The Clerk: And the middle initial is "E"?

The Witness: E, right.

The Clerk: Thank you.

(Testimony of Herbert E. Kidder.)

Q. By Mr. Lewis E. Lyon: Where do you reside? A. In Riverside.

Q. What is your occupation?

A. Patent counsel for Hunter-Douglas Corporation.

Q. Located in Riverside?

A. In Riverside.

Q. What is the business of the Hunter-Douglas Corporation?

A. Manufacturers of venetian blind components and fabricators of aluminium, in general.

Q. Are you familiar with the two Bourns patents in suit, the '981 and '980 patents?

A. Yes, sir, I am.

Q. Are you admitted to practice before the United States Patent Office? A. Yes, sir, I am.

Q. I place before you Exhibit 3, and will ask you if you are familiar with that exhibit.

A. Yes, I am.

Q. Did you have anything to do with the preparation of [396] Exhibit 3?

A. Yes, I had the job of preparing the exhibits.

Q. Now, Exhibit 3 contains a plurality of plates, beginning with plates which are purported to be, I believe, duplicates of the drawings of the two patents in suit. Were those prepared under your supervision? A. Yes, they were.

Q. Plates 3 and 4 of Exhibit 3 are, I believe,—well, plates 2 and 4 are breakdowns of two planes of the two patents. Were those breakdowns made by you? A. Yes, they were.

(Testimony of Herbert E. Kidder.)

Q. Following plate 4 there is a plurality of comparative plates of Bourns and Edcliff instruments; is that correct? A. That is right.

Q. Were these drawings prepared under your supervision? A. Yes, sir, they were.

Q. From what?

A. In part from the actual instruments themselves, in part from engineering drawings, and in part from sketches made of models that were examined at Edcliff.

Q. So far as the Bourns structures are concerned, they were prepared, were they not, from actual models? A. They were.

Q. On each of these drawings, these comparative drawings [397] from plate 5 through to the conclusion of these plates there are certain numbers and certain colors added to the drawings. What significance do those colors and numbers have?

A. The colors were assigned to the different components of the claims, so that they could be identified in the several embodiments shown. The components of the claims were given the same reference numerals that are used in the specifications of the two patents.

Q. Now, the application of these colors and numbers to the different plates from plate 5 to the end of Exhibit 3 was done by whom?

A. I beg pardon?

Q. Who applied these colors and numbers that were assigned to the components of the claims in the different drawings and plates in Exhibit 3?

(Testimony of Herbert E. Kidder.)

A. I applied them personally to the first plate of each illustration.

The Court: What are the numbers? Do they correspond to the elements of the patents in suit?

The Witness: They correspond to the reference numerals for the same corresponding elements of the patents in suit.

The Court: That is so far as the Bourns?

The Witness: Yes, that's right.

The Court: And then in the other you merely marked what, in your opinion, is the equivalent?

The Witness: That is right, yes.

Mr. Lewis E. Lyon: That being true, and the opinion of this witness being fully expressed graphically, and in order to save time, I believe that this witness' opinion is fully shown by Exhibit 3, so I will refrain from further examination, and ask if there is any cross examination.

### Cross Examination

Q. By Mr. Pruitt: Mr. Kidder, how long have you known Mr. Bourns?

A. About four years.

Q. Have you been retained by him for patent advice during this period of time, from time to time?

A. I have been commissioned by him to file certain patent applications, yes.

Q. Did Mr. Bourns retain you in connection with the present claimed infringement in this action?



(Testimony of Herbert E. Kidder.)

A. He has retained me for the preparation of these books.

Q. Had he retained you in any capacity in that regard prior to retaining you to prepare those books?

A. Yes, he asked me to collaborate with Mr. Lyon in any way in the presentation of the prior art, the file history, and anything that might be helpful to Mr. Lyon in the preparation of his case.

The Court: What is your education, Mr. Kidder?

The Witness: I am a mechanical engineer.

The Court: A mechanical engineer?

The Witness: Yes.

The Court: You are not a patent attorney?

The Witness: I am a patent agent.

The Court: I know the distinction between the two. I mean, you are not legally trained, but you are trained in mechanical engineering?

The Witness: That is right.

The Court: And then act as consultant in matters relating to that art?

The Witness: That is right.

The Court: Of what school are you a graduate?

The Witness: The University of Illinois.

The Court: That is a good school. My son teaches there in physical chemistry.

Q. By Mr. Pruitt: In what year did you graduate from the University of Illinois?

A. 1935.

The Court: My son was not even a graduate at

(Testimony of Herbert E. Kidder.)

that time. My son has only been there for the last six years, after he got his Ph.D at Berkeley.

Mr. Pruitt: Now, I don't know whether I have a question pending or not.

The Court: No. I merely wanted to find out the man's [400] background.

Q. By Mr. Pruitt: I will repeat the question: At or about what date did you prepare the first copy of the plates that are shown in Plaintiff's Exhibit 3?

A. The preparation of the drawings extended over quite a few weeks. The first drawings were made about six weeks ago.

Q. That would be approximately the first part of May, 1954? A. Approximately.

Q. At the time of the preparation of these drawings, did you immediately assign the numbers that are shown on the plates in Exhibit 3?

A. No, the numbers were assigned only about two weeks ago.

Q. So that would be about the middle of June, 1954, or thereabouts? A. Approximately.

Q. Where were you when those numbers were assigned to the plates? A. In Riverside.

Q. And were you alone or were you in the company of other persons at that time?

A. I believe I was alone.

Q. And did you assign the numbers shown on the plates in [401] Plaintiff's Exhibit 3 all at that same time?

A. No, over about a three-day period.

(Testimony of Herbert E. Kidder.)

Q. And during that three-day period you alone did the job of assigning the numbers to these plates; is that correct?      A. That is right.

Q. Now, prior to commencing the assigning of the numbers, as shown on those plates, did you have any conference with the attorneys of record for plaintiff in this action concerning what numbers should be assigned to the various elements shown?

A. No, other than the request by Mr. Lewis Lyon to prepare drawings using the patent drawings as a reference, and to the best of my ability assigning the names to the corresponding parts of the drawings.

Q. So this exhibit indicates your own personal opinion of the corresponding features of the Bourns patent with the instruments illustrated; is that correct?      A. That is right.

Q. After the numbers were originally assigned, did you have any further conferences with the attorneys for the plaintiff concerning any change that should be made in the numbers assigned?

A. No, there were no changes made, other than one or two errors which were detected, but before they were given to Mr. Lyon. [402]

Q. And the document, as it is now in evidence, represents the version which sets forth your opinion as to the corresponding numbers shown in the patent; is that right?      A. That is correct.

Mr. Pruitt: I have no further questions, your Honor.

The Court: All right.

Mr. Lewis E. Lyon: I will offer in evidence at this time Exhibit 3, your Honor, which, as I say, has not been heretofore offered, as Plaintiff's Exhibit 3.

The Court: All right.

The Clerk: 3 in evidence. [403]

\* \* \* \* \*

Mr. Pruitt: Your Honor, it has occurred to me, if we are back on the record, that Mr. Lyon is still studying whether or not the '980 patent is still an element.

The Court: Yes; we were considering that the day before yesterday. I don't think we can gain much time by going ahead now, gentlemen. It is 3:30.

Mr. Pruitt: I was going to say that I don't know which documentary evidence to introduce until I get his answer.

The Court: Supposing we adjourn now, and then I will ask Mr. Lyon to tell counsel.

Mr. Lewis E. Lyon: I will write it down.

The Court: '980 is the one that has seven claims?

Mr. Pruitt: Yes, your Honor.

Mr. Lewis E. Lyon: Yes, your Honor.

The Court: Most of your brief was devoted to that one.

Mr. Pruitt: The '81 patent, your Honor, is, of course, the divisional patent.

The Court: It is a one-claim patent.

Mr. Pruitt: It is a divisional patent.

The Court: Yes, it is a split patent.

Mr. Pruitt: And the file history is the same as the '980, to a large extent? [405]

The Court: Yes. However, they didn't allow them to split the invention. You don't mean to say the Patent Office does that?

Mr. Pruitt: No, your Honor. The reason it is treated that way, the '981 seems to be the one that most of the instruments are claimed to infringe.

The Court: The two references they give are two references that are in the other one.

Mr. Pruitt: That is right, your Honor; Rubinstein and Batcheller.

Mr. Lewis E. Lyon: That is correct.

The Court: All right. Then we will recess the case until 1:00 o'clock on Monday. [406]

\* \* \* \* \*

Mr. Pruitt: Your Honor, at the last session I agreed to produce certain loose copies of exhibits, which I offered to produce for Mr. Lyon, and I would like to produce those now. [410]

\* \* \* \* \*

Mr. Pruitt: And I have a copy of a drawing of the B-11 model, which was introduced as Exhibit 34 at page 369 of the transcript.

Mr. Lewis E. Lyon: This drawing is Exhibit 33, then.

Mr. Pruitt: And a copy of the drawing of the B-12 model, which was introduced as Plaintiff's Exhibit 34 at page 370 of the transcript. [411]

\* \* \* \* \*



VIRGIL F. SIMONICK

called as a witness by the defendants, being first sworn, was examined and testified as follows:

The Clerk: What is your name, please?

The Witness: Virgil F. Simonick.

The Clerk: How do you spell your last name?

The Witness: S-i-m-o-n-i-c-k.

Direct Examination

Q. By Mr. Pruitt: Mr. Virgil, where is your address, please?

A. 15843 Moorpark, Encino.

Q. By whom are you employed?

A. Douglas Aircraft Company in Santa Monica.

Q. In what capacity are you now employed by Douglas Aircraft?

A. I am classified as a design specialist, group leader in charge of missile hydraulics.

Q. How long have you been employed by Douglas Aircraft?

A. Since June 29, 1939.

Q. And you have been in your present job for how long, Mr. Simonick?

A. May 1946.

Q. And what was your education, your college education, Mr. Simonick?

A. Well, I received a Bachelor of Science and Bachelor of Aeronautical Engineering degrees at the University of Detroit, Detroit, Michigan.

Q. What year was that?

A. 1933.

Q. Upon leaving the university where did you first practice your profession?

A. At Continental Motors.

Q. Where is that located?

A. Detroit.

(Testimony of Virgil F. Simonick.)

Q. What was the nature of your duties at that organization?

A. Designing layout man in aircraft engines.

Q. How long were you employed at Continental Motors [418] in that capacity?

A. Approximately a year.

Q. What was your next employment?

A. My next employment was with Evans Products, also of Detroit. [419]

Q. And what business was that company engaged in at that time?

A. The design of—the development and manufacture of instruments, pumps, aircraft pumps, at that time boats, air conditioners, automatic loading devices for the automotive industry, automatic transmissions, and carburetors.

Q. And what was the nature of your duties at that organization?

A. I started as design layout man working on boats. Later on I became layout man on hydraulic pumps, worked on automatic transmissions as layout man, and later production engineer, and did a certain amount of work on air conditioners.

Q. Following that employment where did you go?

A. Leaving Evans Products I went to the Naval Aircraft factory for a short time.

Q. Where was that located?

A. Philadelphia.

Q. How long were you there?

A. About four months.

(Testimony of Virgil F. Simonick.)

Q. Following that experience, did you come to Douglas at that time?      A. Yes, I did.

Q. And in what year was that, again?

A. In 1939; June of 1939. [420]

Q. At the outset of your employment by Douglas, what capacity did you fill?

A. I was the layout man on superchargers, and supercharger gear changers.

Q. Following that did you assume some other duties?

A. Following that I became for a short period, about four months, a layout man on hydraulics equipment. Thereafter I became lead man, a position I held for approximately three years, until I became a group leader.

Q. And that is group leader in the hydraulics groups; is that correct?      A. That is correct.

Q. Does that group have any connection with the guided missile program at Douglas Aircraft?

A. Yes, it has.

Q. How long has it had such a connection?

A. Since 1946.

Q. Were you assigned to that group at the same, or at or about the same time as Douglas undertook work in connection with the guided missile program?

A. No, Douglas undertook work on guided missiles before 1946. The type of guided missiles or type of guidance that we are now using first came into being in 1946. At that time I was first man on that type of job.

(Testimony of Virgil F. Simonick.)

Q. Well, generally speaking, Mr. Simonick, what function [421] does the hydraulics group perform in the Douglas missile program?

A. We design the hydraulics components of the missiles, and also the related linkages that actuate the control surfaces.

Q. And does that also involve the measurement of the movements of those control surfaces in the missile?

A. Yes, it does.

Q. And that, in turn, involves potentiometers, does it?

A. Yes.

Q. Are the potentiometers used in connection with your work used both for telemetering and also for control purposes?

A. Yes, sir.

Q. And are adjustable resistors or potentiometers used as a component part of the entire telemetering system which is incorporated in a missile?

A. Yes, sir.

Q. Now, is the entire telemetering and control system that is contained in a missile a complex structure, or is it a simple structure?

A. It is extremely complex.

Q. And one of the components in that complex structure is the potentiometer; is that correct?

A. That is correct. [422]

Q. One or more potentiometers?

A. That is correct.

Q. As a part of your duties at Douglas in connection with the missile program, are you required to be familiar with and understand both the mech-

(Testimony of Virgil F. Simonick.)

anical and electrical functions of the potentiometers used in connection with your work?

A. Yes, sir.

Q. Now, in May of 1936, or thereabouts, what type of potentiometers were being used for the purpose for which you now use such instruments as are produced by Mr. Bourns?

A. Well, we began our designs in May, 1946. The designs had gone to a sketch point a little bit later than that. At that time we were using a rotary type of potentiometer.

Q. Manufactured by what company, or companies?

A. Fairchild Camera Company.

Q. That is the Fairchild Camera and Instrument Company in New York, is it?

A. That is right.

Q. Were there any other manufacturers that were supplying potentiometers for that purpose?

A. Yes, sir.

Q. What other manufacturers?

A. Well, Giannini.

Q. Giannini Instruments. That is a company in Pasadena; [423] is that correct?

A. That is correct.

Q. Was the Chicago Telephone Supply Company supplying potentiometers for that purpose at or about that time?

A. A little bit after that time.

Q. In what year, approximately?

A. '48. I would say around '48.



(Testimony of Virgil F. Simonick.)

Q. Now, was any specific model of the Giannini Instrument used primarily for that purpose?

A. In the equipment over which I had jurisdiction we did not use any Giannini potentiometers.

Q. Did you use a Fairchild potentiometer?

A. We did.

Mr. Pruitt: I will ask the clerk to mark this document for identification.

The Clerk: Defendants' Exhibit H, marked for identification.

(The document referred to was marked Defendants' Exhibit H, for identification.)

Q. By Mr. Pruitt: Mr. Simonick, I show you a sheet, which I will state was taken from the current catalogue of the Fairchild Camera and Instrument Company, and showing an illustration and specifications of a Type 736 Fairchild potentiometer, and ask you if the potentiometer you were using, as indicated, was similar to that model shown in [424] Defendants' Exhibit H, for identification.

Mr. Lewis E. Lyon: Just a moment. I will object to that on the ground that there is no pleading as to which this matter could be material, as to prior knowledge of use by Douglas, that no notice was given of any such reliance, and, further, upon the ground that the question asked is leading and suggestive, and does not call for primary, but secondary evidence.

Mr. Pruitt: Your Honor, this is not offered in connection with the prior use, but merely as a preliminary question to examine the witness about

(Testimony of Virgil F. Simonick.)

the methods that were in use in 1946, prior to the alleged invention by Mr. Bourns, and, further, in rebuttal to the testimony that Mr. Bourns gave on the same subject, as to what people were doing in the missile program at the time of the alleged invention.

Mr. Lewis E. Lyon: Still, your Honor, if anything is to be relied upon either to show anticipation or the prior state of the art, the Code requires 30 days' notice.

The Court: I think the form of the question is objectionable, even limited as it is to the scope just mentioned.

Mr. Pruitt: I will be happy to reframe it, your Honor.

The Court: All right.

Q. By Mr. Pruitt: Mr. Simonick, state whether or not the potentiometer illustrated is similar or the same type of Fairchild potentiometer used in the missile program, as you [425] have previously testified.

Mr. Lewis E. Lyon: That is objected to, your Honor; the same objection as previously stated, and, further, on the ground of its being entirely immaterial.

The Court: I think this witness is an expert, and I think you could ask him, rather than giving him a comparative question, you could ask him what was being used. Let him tell us what it compares with, or what type it is, or show it to him and ask him, "Have you ever seen one of these be-

(Testimony of Virgil F. Simonick.)

fore?" Let him tell us what it is. See if he recognizes it without a leading question.

Mr. Pruitt: Very well, your Honor.

Q. By Mr. Pruitt: Mr. Simonick, can you describe what type of Fairchild potentiometer was being used at that time?

A. Yes, it was a rotary——

Mr. Lewis E. Lyon: Just a moment. I object to that upon the ground it is without the pleadings. Section 282 of Title 35 of the United States Code requires notice of any such material.

The Court: He is trying to show prior use by prior art.

Mr. Lewis E. Lyon: The section applies to prior art and requires 30 days' notice as to prior art under Title 35, Section 282 of the United States Code.

Mr. Pruitt: I am also trying to show, if I might [426] interrupt——

The Court: He is not offering it to show the condition of the prior art, but showing the problem that Mr. Bourns testified existed did not exist. As he has said, he is limiting it to that purpose, and he can do that. I am familiar with the rule that certain types of prior art have to be pleaded if they are relied on as anticipation, and that prior use must be pleaded and special notice given.

Perhaps the relevancy of this testimony does not appear now because counsel stated he was putting the witness on out of order.

(Testimony of Virgil F. Simonick.)

Read the last question, please.

(The question was read.)

The Court: Overruled.

The Witness: I beg pardon?

The Court: You may answer.

The Witness: Substantially the type shown on this exhibit.

Mr. Pruitt: I will offer this for the limited purpose which I previously stated, your Honor, as Defendants' next in order.

The Court: It may be received.

The Clerk: H in evidence.

Mr. Lewis E. Lyon: I will object before the receipt, if I might, on the ground that it has not been properly proven or identified, and on the further ground that it cannot serve [427] any——

The Court: You can bring that out on cross examination. Overruled.

(The document, marked Defendants' Exhibit H, for identification, was received in evidence.)

Q. By Mr. Pruitt: In the use of the rotary potentiometers which you have mentioned, was some type of linkage required in order to connect the potentiometer into the system?

A. Yes, there was. [428]

Q. What type of linkage was used for the purpose?

A. A linkage consisting of a mounting for the potentiometer that could be externally adjustable; a gear mounted on the shaft of the potentiometer

(Testimony of Virgil F. Simonick.)

meeting with a gear on a driven member from which we desired to determine position location.

Q. Were the potentiometers then used in that manner precision instruments, would you say?

Mr. Lewis E. Lyon: That is objected to as leading and——

The Court: He can describe it.

Q. By Mr. Pruitt: What type of potentiometers were used then from the standpoint of accuracy and precision, Mr. Simonick?

A. Well, the potentiometers used at that time were entirely satisfactory from the standpoint of our requirements.

Mr. Lewis E. Lyon: Your Honor, I move to strike that as not responsive to the question; and also as entirely too indefinite to mean anything.

The Court: I will go further. It is meaningless. I don't know what his requirements were.

We must bear in mind that in this court the expert's opinion doesn't rise above the reasons he gives for it, and an expert who gives me general answers without giving reasons to support them, I will disregard, you see, just as I instruct jurors to disregard. So you are not helping your cause by [429] putting a man on and asking him leading questions and having him give me leading answers and meaningless answers, such as the one he gave.

Mr. Pruitt: All right, your Honor. I will bring it out more definitely.

The Court: I am striking the answer not because it is not responsive, because that isn't a good ob-



(Testimony of Virgil F. Simonick.)

jection in this court. In the state court it is, because the legislature has made it so. It is not a good objection, that an answer is not responsive. If the answer is material it doesn't have to be brought out by a particular question. But the stupid legislature at the request of some stupid lawyers put it in the Code of California. But we don't recognize that. If it is material, it doesn't matter that you ask him the question. It isn't necessary.

Q. By Mr. Pruitt: Was the rotary pot used in the manner that you have described used for the same or similar purpose as the pots that you now acquire from Mr. Bourns?

Mr. Lewis E. Lyon: Your Honor, we object to that as a compound, complex question.

The Court: Yes. I haven't even heard that he has acquired any from Mr. Bourns. He hasn't testified to that effect. I don't know that you intend to be bound by the statement of Mr. Bourns, so you will have to have him testify that he is doing that, first. [430]

Q. By Mr. Pruitt: During the last several years, Mr. Simonick, has Douglas acquired linear motion potentiometers from the Bourns Laboratories? A. They have.

Q. And what use is made of those linear motion potentiometers?

A. They are used to measure the same motions that were formerly measured by the rotary potentiometers.

(Testimony of Virgil F. Simonick.)

Mr. Lewis E. Lyon: That doesn't mean anything.

Q. By Mr. Pruitt: How do the results compare between the use of the linear motion potentiometer for that purpose and the rotary motion potentiometer for that purpose in 1946?

Mr. Lewis E. Lyon: Your Honor, I am going to object to that as assuming a fact not in evidence. Actually it is a comparative question for which the basis is not before the court, and would mean absolutely nothing in the evidence.

The Court: I will overrule the objection. Go ahead. You may answer.

The Witness: Will you repeat the question, please?

The Court: Repeat the question.

(The question referred to was read by the reporter as follows: "Q. How do the results compare between the use of the linear motion potentiometer for that [431] purpose and the rotary motion potentiometer for that purpose in 1946?")

The Witness: The results are identical, you can use either one.

Q. By Mr. Pruitt: How does the degree of resolution of the linear motion pots which you have acquired compare to the resolution of the potentiometers then used for those purposes?

A. Comparable.

Q. How do the windings on the resistance coil compare with respect to the size of the wires used then as compared to now?

(Testimony of Virgil F. Simonick.)

A. The wire sizes are slightly larger than those found on the Bourns pot.

Q. What size wire was used in the rotary pots used in 1946?

A. Two thousands in diameter.

The Court: The construction or the means are different, assuming that they achieve the same result?

The Witness: That's right, your Honor.

Q. By Mr. Pruitt: Were the rotary pots then used for the purposes described reliable electrically and structurally?

A. They were very reliable.

The Court: Why did you change? [432]

The Witness: The linkage connecting the pot to the member that it was sensing was rather expensive, and by switching to a linear type potentiometer, rather than a rotary, we were able to achieve economics.

Q. By Mr. Pruitt: Is there a difference from an electrical standpoint between the principle upon which the pots used in 1946 operated and the principle upon which the linear motion potentiometers now operate?

A. If by principle you mean rubbing one coil or a series of coils with an electrical connection, the principle is no different.

Q. In your opinion, Mr. Simonick, was a major drawback to the success of the missile program in 1946 the use of the rotary motion potentiometer with linkage as you have described?

(Testimony of Virgil F. Simonick.)

A. Well, if I may state it this way: If that were the only drawback, we would have been happy at that time.

The Court: Well, state the other drawbacks.

The Witness: Unfortunately, there were a lot of other drawbacks, because other electrical components lacked—the state of the art of other electrical components, as well as other components in the missile from propellants on down to hydraulic valves were in a far worse state of the art than potentiometers.

Mr. Lewis E. Lyon: That is comparing bad eggs, I take [433] it, is that what you mean?

The Witness: Well, there were some noteworthy points that were reliable in those days, and I would say offhand potentiometers were one of the most reliable elements we had in those days.

Mr. Lewis E. Lyon: It is still what I said.

Mr. Pruitt: Are you finished, Mr. Lyon?

Mr. Lewis E. Lyon: Yes.

The Court: All right.

I presume I set a bad example. I am permitted to ask a question.

Mr. Lewis E. Lyon: Pardon me, your Honor. I stand corrected. Rather, I sit corrected.

The Court: You would admit that the linear potentiometer introduced some advantages and benefits, other than mere size and cost that made its use preferable to what preceded, is that correct?

The Witness: The fact that we could eliminate

(Testimony of Virgil F. Simonick.)

some of the costs in linkage was the major factor in going to the linear type.

The Court: Bulk?

The Witness: No. The others were about the same size, but spread a different way, you might say.

Q. By Mr. Pruitt: Did you meet Mr. Bourns during the time when you were employed in your present position [434] at Douglas?

A. As I recollect, it was the latter part of '48.

Q. At that time did Mr. Bourns demonstrate to you a model of an instrument manufactured by him? A. He did.

Q. Can you describe the instrument he showed you at that time?

A. Roughly it was a transitory potentiometer with a three-sixteenths diameter, or five thirty-seconds diameter piston, and it was about one by one square and I think it was around four inches long.

Q. You say that was sometime in 1948?

A. As I remember.

Q. I show you an instrument that has been introduced in evidence in this matter, which is Plaintiff's Exhibit 6. I note that it is not of the same length as you have described. Is that model similar to the one that you have just described?

Mr. Lewis E. Lyon: Which one is that?

Mr. Pruitt: Exhibit 6.

The Witness: I would say that it is, yes.

The Court: Is that the transparent one?



(Testimony of Virgil F. Simonick.)

Mr. Pruitt: Yes.

The Court: There are so many of them I wanted to keep it in mind. [435]

Q. By Mr. Pruitt: Did the one Mr. Bourns showed you at that time have a piston of circular section? A. Yes, sir.

Q. Did you ever purchase an instrument from Mr. Bourns—that is, by “you” I mean Douglas Aircraft—which is identified in Plaintiff’s Exhibit 3 as the Bourns model No. 108?

A. Do you have another view of it? Yes.

Q. Do you recall whether or not the shaft in that device rotates with respect to the carrier member for the contact elements?

A. By our specifications we required that it rotate.

Q. Did the model which Mr. Bourns first showed you have a shaft which rotated in that manner?

A. That I couldn’t say.

Q. Prior to the time that you first saw Mr. Bourns, had Douglas Company ever considered manufacturing a potentiometer in a rectilinear case? A. Yes, we did.

Mr. Lewis E. Lyon: I object to that as entirely immaterial, as to whether they contemplated going in the same business or not.

Mr. Pruitt: I think it is material, your Honor, to show that the development, if any, was obvious to persons who were skilled in the art. [436]

The Court: That cannot be testified to by anybody. The proof of the pudding is in the eating.

(Testimony of Virgil F. Simonick.)

The fact is they didn't make it, but they are buying it. You can't prove what somebody else thought, you know. The fact is that many of these things someone thought of and didn't do anything about, and then somebody thinks of it and achieves something.

Mr. Pruitt: I understand that.

The Court: And the man that thought and didn't do anything about it can't come in and say, "That is nothing; I thought of it, too, and didn't get around to making it." Not that this witness so testified, but it is immaterial testimony. The inference is to be drawn from facts, not from somebody's thoughts.

Strike out the answer. I will sustain the objection to the question. It is not material.

Q. By Mr. Pruitt: Mr. Simonick, I show you Plaintiff's Exhibit 5, which is identified as a Bourns Model 114-1 potentiometer and ask you if you have ever seen one of that type?

A. I have seen one similar to that, yes.

Q. And at or about what time did you see a potentiometer of that type?

A. I think it was in the early part of '51.

Q. Had you had any previous discussions with Mr. Bourns or any of his employees with respect to the feature [437] of this exhibit in employing a side lug?

Mr. Lewis E. Lyon: Your Honor, I am going to object to that as leading and not a proper method of examination. If there was a conversation, let's have the foundation laid.

(Testimony of Virgil F. Simonick.)

The Court: I don't know what it is related to, except it is subsequent to the patent application. The patent application is dated February 20, 1948. Any discussion with a prospective customer as to experiments being made just doesn't mean anything, doesn't destroy the value of an invention. It is quite evident that he was discussing them and trying to figure something out that would fit the particular thing.

Mr. Pruitt: Your Honor, this is not offered on the patent issue, but rather to show that the Douglas Company made certain requirements for the instrument purchased by Douglas, and I want to show they made certain requirements of the defendants to produce instruments that the customer required.

The Court: That doesn't mean anything. What has that got to do with any of the issues in this case?

Mr. Pruitt: It has something to do with the charge of the plaintiffs that the defendants have created confusion in making instruments like those of the plaintiff.

The Court: I don't see that that is any question, the fact that they made demands.

I will sustain the objection.

Q. By Mr. Pruitt: Did Douglas ever purchase any of [438] the Model 114 instruments from Mr. Bourns?

A. I don't recall what—was it the one you showed me?

(Testimony of Virgil F. Simonick.)

Q. Yes, it was Plaintiff's Exhibit 5 which I show you again.

A. I don't recall that we bought any like that.

Q. Mr. Simonick, what in your opinion was the biggest single problem in connection with procuring for Douglas' purposes a linear motion potentiometer that would work satisfactorily for your purposes?

A. Ingenuity in making the unit small, and ingenuity you might say, in manufacture of the parts, such as there was practically no backlash, and things of this type are generally a matter of mechanical ingenuity rather than electrical.

Q. I show you now, Mr. Simonick, what is identified as Defendants' Exhibit D and is a Bourns potentiometer bearing part No. 8002925, and ask you if you have ever seen an instrument of that character?      A. I have. [439]

Mr. Pruitt: I hand this instrument to the clerk in disassembled form, and ask that it be marked as Defendants' Exhibit next in order, for identification.

The Clerk: Defendants' Exhibit I, marked for identification.

(The instrument referred to was marked Defendants' Exhibit I, for identification.)

Q. By Mr. Pruitt: I show you this instrument, Mr. Simonick, in disassembled form, and ask you if you have ever seen an instrument like that.

A. Yes.

Q. Can you identify that instrument?

(Testimony of Virgil F. Simonick.)

A. Yes.

Q. What is it?           A. An Edcliff.

Q. Now, with respect to Defendants' Exhibit D, in the manufacture of that instrument what would be the effect upon the electrical qualities of that instrument to substitute for the resistance coil contained therein a resistance coil from a rotary motion potentiometer?

Mr. Lewis E. Lyon: That is objected to as entirely immaterial, and unless the two were a rotary motion, it could not be substituted.

The Court: Overruled. You may answer, if you can.

The Witness: You could use the same elements in either— [440] the same resistance elements in either the rotary or the transitory type. Of course, in the rotary type, to convert it into a linear type, you just have to take the arc and spread it flat.

The Court: In other words, the two parts are not interchangeable?

The Witness: They are not interchangeable.

The Court: And you would have to make a construction to accommodate one or the other?

The Witness: That is correct, your Honor. If you originally made a rotary potentiometer, you could not take the element out of it and make it a linear potentiometer without doing some rework to it.

The Court: That is right. Then in using it, you would have to have a different——

The Witness: That is right.



(Testimony of Virgil F. Simonick.)

The Court: —place on the missile, differently arranged, depending on whether you used the one or the other; isn't that correct?

The Witness: As I understood the question, your Honor, I thought what he was talking about primarily was the resistance element.

The Court: Yes, I know what he is talking about, but I also know what I am talking about.

The Witness: Well, it is pretty hard to say how you could [441] take a rotary actuator and convert it into a linear component, without component modification.

The Court: That is right.

Q. By Mr. Pruitt: Do you know what part, if any, Douglas played in the design of the instruments which I have displayed to you?

Mr. Lewis E. Lyon: That is objected to.

The Court: The objection is sustained. There is no plea of joint invention, or invention by others. You are not attacking it on that ground.

Mr. Pruitt: Your Honor, again, as I understand the plaintiff's theory, they have attempted to prove that the defendants have copied an instrument of the plaintiff's and have sold it to customers, and that the customers have been confused with respect to which instrument is plaintiff's. I think I am entitled to show through this witness that the Douglas Company required that the instruments have a similar appearance, and that the Douglas Company is not confused as to where they got these instruments.

(Testimony of Virgil F. Simonick.)

The Court: You cannot prove a negative. They didn't offer any objection as to the Douglas Company. You can't prove a negative that way.

Mr. Pruitt: They did, your Honor.

The Court: Not as to this witness. This witness may not have been confused, but another witness may have been. [442] They said that sometimes when it should have been sent to one, it went to another, and there is no showing that it went through this man. He is an expert engineer. Perhaps he would have detected the difference. The question is with reference to the mind of the person who was buying. He is not in the purchasing department. He is an expert engineer. He probably would be objecting if we called him a salesman.

Mr. Pruitt: I am not calling him that.

The Court: That has nothing to do with it. You can also prove a negative, too, for that matter, but you can't prove it this way. When they show that the gentleman who received the order shipped it from one to the other, you cannot prove by an engineer the fact he would not have been confused by that, because then you are disproving nothing.

Mr. Pruitt: I will lay a further foundation, your Honor.

Q. By Mr. Pruitt: Mr. Simonick, what part, if any, do you play in the procurement of potentiometers for use in the program that you have described?

A. Together with the equipment group at Doug-

(Testimony of Virgil F. Simonick.)

las, we place the requisitions for the potentiometers with the purchasing department.

Q. And in those requisitions do you state what sources should be used for the procurement of the instruments? [443]      A. Yes, we do.

Q. In connection with Douglas part No. 8002925 who were the authorized sources of which the purchasing department was advised?

A. We authorized the purchasing department to deal with Bourns, Edcliff, and Giannini.

Q. And did your department prepare specifications to be forwarded to the approved sources?

A. Yes, we did.

Q. To whom were the specifications forwarded?

A. The specifications were forwarded through our purchasing agent to the three vendors that I named.

Mr. Pruitt: I hand the clerk a folder and ask that it be marked as the defendants' next in order, for identification.

The Clerk: Defendants' Exhibit J, marked for identification.

Q. By Mr. Pruitt: I show you, Mr. Simonick, Defendants' Exhibit J, for identification, and ask you if you will review that and tell what that document is.

Mr. Lewis E. Lyon: I think the document speaks for itself as to what it is.

The Court: That is all right. The witness may describe it. I don't know what it is.

(Testimony of Virgil F. Simonick.)

The Witness: Douglas spec.-control drawing for that single potentiometer. [444]

Q. By Mr. Pruitt: For part 8002925?

A. '2925.

Q. And are these the specifications that were forwarded to the three approved sources that you previously mentioned? A. That is correct.

Mr. Pruitt: I will ask you to identify in this document the specification, if any, relating to the external configuration and appearance of the instrument.

The Court: Does that have a date, Mr. Simonick?

The Witness: Yes, sir. There is a date of the original release on here. 10—no, let's see. Here is one date here. These things are subject to engineering changes, and, consequently, they may not have the same date. Substantially, at October 15th.

The Court: 1951?

The Witness: 1953.

The Court: '53. All right.

Mr. Pruitt: Now, will you read the question, please?

(The question was read.)

The Witness: This document does give the external——

Mr. Lewis E. Lyon: I renew my objection to something that is in 1953. The specification certainly has no materiality to a suit filed here in 1951.

The Court: On the question of unfair competition we take it right up to the date of trial. [445]

Mr. Lewis E. Lyon: Suppose this witness says

(Testimony of Virgil F. Simonick.)

they make one exactly like Bourns. Does that——

The Court: Let's not argue.

Mr. Lewis E. Lyon: I don't want to argue it, but I don't want to keep——

The Court: That is all right. I don't know what he is trying to do. I think he is trying to prove they delineated it, and it was up to them to go and produce it.

As a matter of fact, if I told them that I wanted something, and they went ahead and made it, and you invented it, it is still an invention, unless it just described something that anyone, any electrician with a pair of pliers could have put together. But that does have a bearing on the question of unfair competition, whether they laid out the specifications.

Of course, the weakness of that situation is this: When they knew that there were competitors in the market, it wasn't up to them to decide who was prior. They said, "We like this kind of thing, and whoever gives it to us, we will take it." So what? What effect does that have on the trier of fact? None.

Mr. Lewis E. Lyon: That is my point.

The Court: Suppose a man invents a thing, and the man says, "I want something like it." Suppose he actually told Pitzer, "See if you can make something like this for me," and Pitzer went out and imitated the other man's invention. That [446] would not excuse it. That would not make unfair



(Testimony of Virgil F. Simonick.)

competition fair competition, because this gentleman knowing of it, hearing of it, and having in mind the other invention, asked for something similar.

The Witness: Your Honor, may I change my statement relative to the dates on here?

The Court: Yes.

The Witness: We have redrawn this, and some of our drawings are changed many times at the instance of the Ordnance Department, to conform with their changing practices. I notice it was originally drawn on June 1, 1951.

Mr. Lewis E. Lyon: Then, your Honor, we will object to the receipt of this as not the best evidence. Let's have the 1951 one, and not this one.

The Court: That's all right. Let's go on. If we quibble like this over small matters, we will never get through.

Mr. Lewis E. Lyon: No, we don't want to quibble, your Honor, but we want to know what this is.

The Court: I am not interested. I am going to disregard a lot of these small matters. I am sitting without a jury, and I know what is material and what is not material. So if I let in something that is not material, I will just junk it later on.

Mr. Pruitt: I will offer this as the defendants' next [447] in order.

The Court: It may be received.

The Clerk: J in evidence.

(Testimony of Virgil F. Simonick.)

(The document referred to, marked Defendants' Exhibit J, for identification, was received in evidence.)

[See Book of Exhibits.]

Q. By Mr. Pruitt: In connection with the preparation of those drawings, Mr. Simonick, what part did you play, if any?

A. I was responsible for obtaining an external configuration or envelope that would fit within the limited space we had available. Also, I was partially responsible for seeing that it had proper life characteristics, and that the mechanism looked as though it were trustworthy and of good design.

Q. And was some other official at Douglas responsible for the other portions of the specifications?

A. Yes.

Q. Who was that?

A. To which specification are you referring? Generally, or this particular one?

Q. This particular model.

A. That particular model, yes, other people were responsible for it. In fact, there were several people responsible for the other portion.

Q. Can you identify those persons?

A. At the start of the program Mr. Everett Pier, now [448] deceased, was in charge, and under him and most directly concerned, he had several assistants to handle it, one of whom was Walter Shavell, now at the Giannini Company; Mr. Waters of the—Mr. Robert Waters of the Douglas Air-

(Testimony of Virgil F. Simonick.)

craft Company; and later Mr. Aldinger of the Douglas Company, and Mr. Rex Cruize.

Q. What determines the requirements of Douglas with respect to the size, shape, and dimensions of the instruments required by you?

A. The space in which—the limited space in which it has to fit.

Q. Now, were those particular characteristics that are shown in the drawing with respect to the two instruments you have identified based upon sketches that were submitted to you, or to anyone else at Douglas, to your knowledge, by Mr. Goepfinger of the Bourns Laboratories?

A. The envelope drawing, as shown in the specification, was the result of our working jointly with all three vendors, and laying out the missile space that was available to them. Actually, the people who determined the envelope size and shape more than anyone were the people who did not actually make production units for them, the Giannini Company.

The Court: These things are not bought in the open market, but they are, to some extent—— [449]

The Witness: Special.

The Court: Special, like custom made?

The Witness: That is right.

The Court: As they did in olden times. For instance, have you had a pair of custom made shoes?

The Witness: No.

The Court: No? I guess not in this country. In other words, it isn't like going to a hardware store

(Testimony of Virgil F. Simonick.)

and buying parts, but you are dealing with very sensitive, high-precision instruments, and you need certain things, and you go out in the market and find something that fits, and then you see if it can fit into your particular plane, and then you order; isn't that correct?

The Witness: That is correct. We usually find the people who are interested in this type of work have a rough idea of the size and shape of the thing, and we ask them if they can fit their particular design principles into our particular shape.

The Court: Particular shape. That is right. All right.

Q. By Mr. Pruitt: Did Mr. Rex Cruize participate in any way in the preparation of the 1951 specifications you have just identified?

A. Speaking from the standpoint of determining the envelope, the outer configuration, I can say no. This is not normally Mr. Cruize's responsibility. It strictly [450] has to do with the electrical requirements in it, mechanical requirements of putting the thing in its place.

Q. And when did Mr. Cruize assume that function, to the best of your knowledge?

Mr. Lewis E. Lyon: Your Honor, I object to that on the ground it assumes a fact not in evidence. He didn't say he did.

The Court: Yes, he said that he was in charge. Go ahead. You may answer.

The Witness: To the best of my knowledge, he

(Testimony of Virgil F. Simonick.)

got into this program in 1952, about August or September.

The Court: And he was a Douglas employee?

The Witness: Yes, sir.

Q. By Mr. Pruitt: In what year, if you know, did Douglas first purchase the model 118 from Mr. Bourns? I again show you Defendants' Exhibit D, which is before you.

A. This one? Are you asking me when did we first buy these?

Q. Yes.

A. Our requisitions for the purchase of these was early in '51.

Q. 1951? A. That's right.

Q. Do you know when you actually received production units of this model, which you have just seen?

A. No, sir, I don't, because another company was an [451] intermediary in the production process, and I don't know when they stopped.

Q. What other company was that?

A. Bendix.

Q. When did Bendix first become associated with Douglas in the program?

A. Well, as I recall, it was in the latter part of June, of 1951.

Q. Was Bendix producing some equipment for Douglas? Is that correct?

A. I don't believe—

Q. Subsequent to June, 1951 did Bendix pro-



(Testimony of Virgil F. Simonick.)

duce certain assemblies of equipment for Douglas Aircraft?      A. That is quite right.

Q. And did those assemblies incorporate the models of instruments which are identified as Defendants' Exhibit D?

A. That is correct. [452]

Q. After the preparation of the specifications which you have identified, do you know whether or not the suppliers presented prototypes of the requested model to Douglas?

A. In order to get our approval to go into production, they must have submitted prototypes.

Q. Did you see any of the prototype models that were submitted?

A. I don't recall of having seen them. The prototypes normally don't go to me first, they go to the electrical department that passes on electrical characteristics before I am shown the thing.

Q. Did you ultimately approve a prototype that was forwarded to you by Mr. Bourns?

A. Approval of the prototype, except for external dimensions, is not within my province. That is in the hands of the equipment engineer, essentially electrical engineer.

Q. Do you know whether or not the Bourns prototype of that model was accepted by Douglas?

A. I assume that it was, because we bought some in production.

Q. Would your answer be the same with respect to the model produced by the defendant Edcliff?      A. That is right.

(Testimony of Virgil F. Simonick.)

Q. Mr. Simonick, have you ever seen an instrument manufactured and sold to Douglas by Edcliff Instruments [453] which did not have the Edcliff name imprinted on the instrument?

A. I have not.

Q. Are you familiar with the procedure followed by Douglas Aircraft in returning instruments to suppliers for rework when necessary?

A. Yes, sir.

Q. Will you describe that procedure, please?

A. The fact that it is to be returned infers that it is being rejected for some particular reason, it must be rejected by an inspector; the inspector writes his tag in copy form, several copies. One of the copies goes to the purchasing department, who acts upon his rejection, and writes shipping papers to the shipping department, authorizing the shipping department to send them back to the vendor. At the same time the purchasing department authorizes the transfer of the parts from the inspection department to the shipping department. At the same time a copy is given to the stock people so that they know where the part is.

Q. The purchasing department gets the memorandum from the inspector who rejected the instrument; does the purchasing department get the instrument itself?

A. Not that I know.

Q. As I understood it—

A. They shuffle paper; they don't look at physical parts, it is just so much paper to them. [454]

Q. Is it your testimony that the purchasing de-

(Testimony of Virgil F. Simonick.)

partment handles the paper work and then directs the receiving department to send the item to the shipping department for return?

A. That is correct.

Q. When you are considering purchasing a type of potentiometer for use in a program, do you have any contact with the suppliers of those items, or prospective suppliers of those items?

A. Yes, we do. Generally from our association with other people in the same business, that is, missile or aircraft people, we know of many people who are interested in supplying certain types of equipment, and we usually try to contact each of them.

Q. And from time to time have you contacted the Bourns Laboratories with respect to instruments produced by that company?

A. I personally have never contacted Bourns Lab. Our equipment section handles that part, because the final specifications come out under their jurisdiction.

Q. I see.

Mr. Pruitt: Your Honor, if we could have about a five-minute recess I think I could finish with this witness very shortly.

The Court: All right. [455] (Recess taken.)

The Court: All right.

Q. By Mr. Pruitt: Mr. Simonick, do you recall the date on which the envelope specifications for the Douglas No. 8002925 were first issued?

A. Yes, in June of 1951.

(Testimony of Virgil F. Simonick.)

Q. To your knowledge did Douglas ever purchase a ten and a quarter inch stroke potentiometer from the defendants in this case?

A. Yes, they did.

Q. I show you plate 19 of Plaintiff's Exhibit 3, and ask you if that is the potentiometer you referred to? A. Yes.

Q. At or about what date did you purchase——  
How many potentiometers of the Model E-1 of defendant did you purchase?

A. There weren't very many. Maybe four or six.

Q. You don't remember?

A. Four or six, or something.

Q. At or about what date did you purchase those instruments?

A. It was probably in March of 1951.

Q. Did you have any discussions with any representative of Edcliff concerning those instruments prior to the purchase thereof by Douglas? [456]

A. Yes, we had several discussions with Edcliff prior to the purchase of those particular potentiometers.

Q. What individual at Edcliff did you have those discussions with?

A. Dillon; Mr. Dillon.

Q. What, if any, of the characteristics relating to size and shape was specified by Douglas in connection with that instrument?

A. All the external dimensions except for the diameter of the rod.

Q. Did Edcliff submit drawings of that instru-



(Testimony of Virgil F. Simonick.)

ment to you prior to the purchase of it by Douglas?

A. They submitted a sketch of the instrument prior to our purchase.

Q. Upon presentation of the sketch did you recommend the purchase of that instrument from Ed-cliff Instruments? A. Yes, sir.

Mr. Pruitt: No further questions, your Honor.

The Court: All right.

Mr. Lewis E. Lyon: No cross examination.

Mr. Pruitt: Thank you, Mr. Simonick. [457]

\* \* \* \* \*

### ROBERT R. WATERS

called as a witness by the defendants, being first sworn, was examined and testified as follows:

The Clerk: What is your name, please?

The Witness: Robert R. Waters.

### Direct Examination

Q. By Mr. Pruitt: Where do you reside, Mr. Waters?

A. 9631 LaTijera Boulevard, in Los Angeles.

Q. By whom are you employed?

A. Douglas Aircraft Company.

Q. For how long have you been so employed?

A. Four years.

Q. What was your education, Mr. Waters?

A. Bachelor of Science and Master of Science in electrical engineering at Cal Tech as of 1950.

Q. Did you commence working for Douglas Aircraft immediately after your graduation or receipt of your degrees from Cal Tech?



(Testimony of Robert R. Waters.)

A. That is correct.

Q. In what capacity were you first employed by Douglas?

A. As a research lab analyst working on, primarily, testing of instruments. [458]

Q. What is your present employment at Douglas?

A. I am a designer doing preliminary design work.

Q. Has your work at Douglas involved specifications and approval of potentiometers acquired for use in connection with the missile program of Douglas Aircraft?

A. Yes, sir, it did.

Q. And does it at the present date?

A. It does not.

Q. And for how long a period were you in the department dealing with the acquisition of potentiometers for use in the missile program?

A. I am still in the same section, but I had that responsibility for perhaps two years, after 1951.

Q. In what capacity, if any, do you participate in the procurement of linear motion potentiometers in connection with the missile program?

A. I wrote the requisition which is sent to the purchasing department for most of the potentiometers bought between, say, early '51 and late '52.

Q. And prior to recommending the purchase of potentiometers do you prepare electrical specifications for the potentiometers required by Douglas?

A. That is correct.

Q. When, if you recall, were the specifications

(Testimony of Robert R. Waters.)

made for the Douglas part number 8002925? [459]

A. Is that the single potentiometer?

Q. The single potentiometer, yes.

A. That was in late—middle to late 1951.

Q. I show you now Defendants' Exhibit J and ask you if these are the current specifications for that model potentiometer?

A. These, I believe, reflect all of the changes up—well, dated October '53. Any changes further than these, I believe, are still in the system. So these are the latest.

Q. That represents the specifications from June 1951 corrected through October 1953, is that correct?

A. That is correct. I notice there is "G" change. That is how many changes have been made on it. But in each case it was brought up to date.

Q. In connection with the specifications which you have just identified, did you participate in the preparation of any of the electrical specifications therein contained?

A. That is correct, that was my responsibility.

Q. What types of electrical requirements are set forth in those specifications?

Mr. Lewis E. Lyon: Objected to, your Honor, on the ground the specifications speak for themselves.

The Court: Overruled.

The Witness: In general, the accuracy and change of [460] electrical calibration and other electrical characteristics to properly describe how it will operate in its intended circuit. [461]

(Testimony of Robert R. Waters.)

Q. By Mr. Pruitt: Now, were the instruments covered by those specifications purchased for a specific use by Douglas Aircraft Company?

A. Correct.

Q. Did Mr. Cruize participate in the development of the original specifications of that model number?

A. No, sir, not the original.

Q. Prior to the preparation of those specifications, did you confer with prospective suppliers concerning those specifications? A. We did.

Q. What supplier or suppliers did you speak to in that connection?

A. Bourns Labs, Edcliff Instruments, and Gianini, Inc.

Q. Had you met representatives of Edcliff Instruments prior to the commencement of the discussions with them with respect to the particular instrument covered by those specifications?

A. Yes; yes.

Q. At or about what date did you first meet a representative of Edcliff Instruments?

A. It was in December, of 1950.

Q. At that time whom did you speak to representing Edcliff Instruments? [462]

A. It was either Mr. Pitzer or Mr. Dillon. I am not sure which. I believe it was Mr. Dillon.

Q. And what did Mr. Dillon say to you, in substance, and what did you say to him, in substance, at that meeting?

A. He presented himself as a prospective man-

(Testimony of Robert R. Waters.)

ufacturer of potentiometers, and he wanted to know of our requirements for potentiometers, and we told him the status at that time of what we wanted.

Q. Do you recall now what it was that you did want, and what you did tell Mr. Dillon you wanted?

A. We were in the process of evolving the requirements for the single, dual, and triple potentiometers we have here. We told him of the requirements as they existed at that time. In common with other prospective manufacturers, we kept bringing them up to date according to our thinking.

Q. As of that date had Douglas ever purchased from Bourns Laboratories an instrument similar to Defendant's Exhibit D, which I show you?

A. No, sir, not at the beginning of 1951.

Q. Had Douglas purchased from anyone an instrument similar to that instrument at or about that date, that is, in December, 1950?

A. By similar, you mean similar in appearance? No.

Q. Did you discuss with the three suppliers that you [463] mentioned the various requirements of those specifications? A. We did.

Q. And it was over the period from January, 1951, until June, 1951, when they were first issued; is that correct?

A. That is about right, yes, sir.

Q. Did you request or receive prototypes of the single instrument covered by those specifications from any of the suppliers with whom you had had the discussions?



(Testimony of Robert R. Waters.)

A. As a single instrument, I am not certain. We received prototypes of instruments, which were either for single or multiple purposes, from both Edcliff and Bourns Labs.

Q. And at or about what date did you receive those prototypes?

A. That was early in '51.

Q. In the materiel ordered, that you send to the purchasing department, do you specify what sources may be used for the procurement of that materiel?

Mr. Lewis E. Lyon: That is objected to on the ground that those matters are in writing, and the writings should be produced.

The Court: No. Overruled.

The Witness: Quite frequently we do specify specific suppliers when, in engineering judgment, we feel that that is proper. Many times we allow the purchasing department to buy on strictly a price and delivery basis. [464]

Q. By Mr. Pruitt: In connection with the proposed purchase of the Douglas part No. 8002925, being the single instrument, did Douglas specify the approved sources for those instruments?

A. We did.

Q. And who were the approved sources?

A. We authorized them, or recommended that the purchasing department contact Giannini, Edcliff, and Bourns Labs.

Q. Is it the policy of the Douglas Aircraft Company, so far as you know, to have more than one



(Testimony of Robert R. Waters.)

source for material used by it in connection with the guided missile program?

Mr. Lewis E. Lyon: That is objected to on the ground there is no foundation laid to show this witness has any knowledge, or any voice in any such policy program.

The Court: Overruled.

The Witness: Would you repeat the question, please?

The Court: He doesn't understand the question. Read it, please?

(The question was read.)

The Witness: When possible, without undue cost, it is always considered desirable.

The Court: It is good business to always have more than one source of supply, isn't it?

The Witness: Quite right. [465]

Q. By Mr. Pruitt: Do you know if the Douglas part No. 8002925 which was purchased from the Bourns Laboratories was purchased for incorporation into devices manufactured by Douglas for the United States Government?

A. That is correct.

Mr. Lewis E. Lyon: That is objected to, your Honor, on the ground there is no foundation laid.

The Court: Overruled.

The Witness: That is correct.

Q. By Mr. Pruitt: Would your answer be the same as to those devices purchased from the defendant, Edcliff Instruments?      A. Yes, sir.

Q. And were the potentiometers so acquired

(Testimony of Robert R. Waters.)

from Edcliff Instruments incorporated in devices which were being made for the United States Government?       A. They were.

Mr. Lewis E. Lyon: That is objected to on the ground there is no foundation laid, your Honor.

The Court: Overruled.

The Witness: They were.

Q. By Mr. Pruitt: And were certain of the potentiometers acquired used in connection with development work under the Government contract that you mentioned?

Mr. Lewis E. Lyon: The same objection, your Honor. [466]

The Court: Overruled.

The Witness: They were.

Q. By Mr. Pruitt: Now, from 1950, and thereafter, were you participating in the development at Douglas of any test techniques with respect to potentiometers acquired for use in the missile program?       A. I was.

Q. And did one of those test techniques involve an electrical circuit to test noise?

A. It did.

Q. Did you make that circuit available to suppliers of potentiometers?

A. Yes, sir, we did. We required that they test to that circuit, because we had decided that that is the way we wanted them checked.

Q. Can you state at or about what date that test circuit was given to the suppliers?

A. I believe our conversations with them first

(Testimony of Robert R. Waters.)

brought it out very early in '51. Whether we actually then transmitted a circuit, I believe it was later on, when the test spec. was written.

Q. Can you describe the circuit that was given to the suppliers for that purpose?

A. Yes. It involved a few simple electrical elements, a battery, and an oscilloscope or other device designed to [467] show on record the effect of electrical noise in the potentiometer.

Q. In the year 1951, and thereafter, did Douglas require its suppliers of potentiometers to test the potentiometers for linearity, and to submit a report of linearity with the instruments sold to Douglas?

A. That is correct.

Q. And did the specifications concerning testing, include a test for linearity?

A. They did.

Q. And what type of test was recommended for that purpose?

A. It was a test involving a circuit similar to a Wheatstone bridge, which plotted the electrical output of the instrument versus mechanical motion of whatever the drive mechanism was.

Q. Is the Wheatstone bridge something that is known to you as an electrical engineer?

A. Yes.

Q. Where did you run across the Wheatstone bridge in connection with your education?

A. I believe the first time was in a senior high school physics course.

(Testimony of Robert R. Waters.)

Q. In what manner is the record of a linearity test made? [468]

A. Generally, for recording electrical output, in a chart along with the corresponding mechanical position.

Q. And are instruments used for that purpose that make the chart automatically?

A. There are some instruments devised to do it automatically. Generally, it requires an operator to actually perform the motion and read a dial, or set a dial, or something similar.

Q. Can a brush analyzer be used for the making of that type of a test?

A. Yes, that is one of the devices that can be used.

Q. Is that an instrument that is commercially available?      A. Yes, it is.

Q. In connection with the potentiometers purchased by Douglas, did you prepare any specifications for submission to suppliers covering the test procedures recommended by Douglas?

A. We did. [469]

Mr. Pruitt: I will ask that this booklet be marked as Defendants' exhibit next in order for identification.

The Clerk: Defendants' Exhibit K.

(The exhibit referred to was marked Defendants' Exhibit K, for identification.)

Q. By Mr. Pruitt: Mr. Waters, I show you Defendants' Exhibit K for identification and ask you what that document is?

(Testimony of Robert R. Waters.)

A. It is a test procedure for all of these models of potentiometers, single, dual, and triple, involving both electrical and mechanical tests.

Q. And at or about what date were those specifications distributed to suppliers of those instruments?

A. That was soon after this October 18th date, 1951, which is the date it was finally printed by Douglas.

Q. And was a copy of those specifications sent to Edcliff Instruments?

A. Yes, sir, I am certain it was.

Q. And was a copy sent to Bourns Laboratories?

A. Yes, sir.

Mr. Pruitt: I will offer that as defendants' next in order, your Honor.

The Court: It may be received.

The Clerk: K in evidence. [470]

(The exhibit referred to was marked Defendants' Exhibit K, and was received in evidence.)

[See Book of Exhibits.]

Q. By Mr. Pruitt: In 1950, Mr. Waters, were you familiar with materials used in potentiometers for the resistance wire?

A. Yes, sir, in middle and late 1950.

Q. What type of wire was commonly used for that purpose during that time?

A. There were many different manufacturers of wire; Jelliff, Evanohm, Sigmund Cohn, Ney, Driver-Harris, many others.

Q. Did Douglas incorporate in its specifications



(Testimony of Robert R. Waters.)

any reference to the type of wire which should be used in resistance elements in the potentiometers acquired by it?

Mr. Lewis E. Lyon: Objected to, your Honor, on the ground the specifications speak for themselves. They are before the court.

The Court: Overruled.

The Witness: As soon as we knew of the superiority of precious metals, we required that the potentiometer windings and brushes be made of precious metals, such as platinum, palladium, and so forth.

Mr. Pruitt: Mr. Lyon, in the notice to produce at page 20 I asked for an original of a letter dated 1-11-51 from Douglas Aircraft to the Bourns Laboratories, and the [471] following item appearing on page 20 of the notice to produce. I will ask that those two documents be produced at this time.

Mr. Lewis E. Lyon: What were they?

Mr. Pruitt: On page 20 of the notice to produce, item 1 is the letter from Douglas Aircraft dated 1-11-51 to Bourns Laboratories; item 2 is an enclosure in that letter addressed from the Air Force Cambridge Research Laboratories, Cambridge, Massachusetts, to Douglas Aircraft Company, bearing the date 12-15-50.

Mr. Lewis E. Lyon: I will see if they have been able to be located.

The Court: You say you haven't been able to locate it?

(Testimony of Robert R. Waters.)

Mr. Lewis E. Lyon: We have it here, your Honor.

Mr. Pruitt: The letter from Douglas is signed by Schuyler Kleinhaus for E. Burton. The other letter is signed by R. J. Sullivan.

Mr. Lewis E. Lyon: Yes, I have the letter, January 11, 1951 with its attached enclosure.

Mr. Pruitt: Will you produce it, Mr. Lyon? May I use them?

(Document handed to counsel.)

Mr. Pruitt: I ask that these documents be marked as Defendants' Exhibit for identification.

The Clerk: Defendants' Exhibit L marked for identification. [472]

(The exhibit referred to was marked Defendants' Exhibit L, for identification.)

Q. By Mr. Pruitt: Mr. Waters, I show you correspondence which I have identified and ask you if you have seen the letter dated 15 December 1950? A. Yes, sir, I have.

Q. And where did you see that letter?

A. This letter was shown to me by my supervisor at this time the 15th of December. I believe it had been received just a few days when I first saw it.

Q. And by reference to that letter does that refresh your recollection as to the date on or about which Douglas considered the use of platinum alloy wire as a better element wire for the potentiometers acquired by it?

Mr. Lewis E. Lyon: We object to that, your

(Testimony of Robert R. Waters.)

Honor. If this is an endeavor to impeach his own witness's testimony——

The Court: Oh, no. Overruled.

The Witness: I was very recently put into this particular position at this time, and whether my supervisor had previously known of these wires, or not, I cannot testify; but at this time we were then definitely familiar with them.

Mr. Pruitt: I will offer this in evidence as the defendants' next in order.

The Court: It may be received.

The Clerk: L in evidence. [473]

(The exhibit referred to was marked Defendants' Exhibit L, and was received in evidence.)

[See Book of Exhibits.]

Q. By Mr. Pruitt: In December 1950, Mr. Waters, were you familiar with the types of contact material used in potentiometers at that time?

A. Through this letter and other references like it, yes.

Q. What contact material was commonly used in potentiometers at or about that date?

A. Contact material, one of them that I particularly remember is the Paliney No. 7.

Q. Was that particular product advertised for use for that purpose?

Mr. Lewis E. Lyon: That is objected to, your Honor, as not calling for the best evidence.

The Court: Overruled.

The Witness: I believe it was.

Mr. Pruitt: I would like to have marked what

(Testimony of Robert R. Waters.)

purports to be a catalog of J. M. Ney Company, and ask that it be marked defendants' next in order for identification.

The Clerk: Defendants' Exhibit M marked for identification.

(The exhibit referred to was marked Defendants' Exhibit M, for identification.)

Mr. Pruitt: I also hand the clerk what purports to be [474] catalog of Sigmund Cohn Corporation and ask that it be marked as the defendants' next in order for identification.

The Clerk: Defendants' Exhibit N marked for identification.

(The exhibit referred to was marked Defendants' Exhibit N, for identification.)

Q. By Mr. Pruitt: Mr. Waters, I show you Defendants' Exhibit M for identification and ask you if on or about December 1950 you saw a catalog similar to that?

Mr. Lewis E. Lyon: We will object to that, your Honor, as leading, grossly so, and also on the proposition that what is similar to that doesn't mean a thing, as far as this record is concerned.

The Court: A catalog, as we know, is published in many copies, so the witness may never have seen the identical thing, but he may have seen another copy, just as a copy of a newspaper.

Q. By Mr. Pruitt: Will you examine it, Mr. Waters, and see if you have seen one similar to it?

Mr. Lewis E. Lyon: Same objection. I object to

(Testimony of Robert R. Waters.)

the use of the word "similar." If it is an identical copy, that is another thing.

The Court: You tell us.

The Witness: I did around that period see catalogs which had substantially the same material in them. [475]

Q. By Mr. Pruitt: Calling your attention to——

Mr. Lewis E. Lyon: That is just exactly the answer, your Honor, that I expected. And what does some of the same material mean?

The Court: All right. You can bring that out on cross examination. There is already testimony on your side that those three, Ney and Cohn, and the other one, were standard companies which dealt in certain supplies and provided methods of testing, so on and so forth. All right. Go ahead.

Q. By Mr. Pruitt: Calling your attention to page 5 of Defendants' Exhibit M, for identification, and a section entitled "Paliney No. 7," did the catalogs you saw on or about December 1950 have material in connection with Paliney No. 7 in the catalog?

Mr. Lewis E. Lyon: We object to that, your Honor, as calling for secondary evidence.

The Court: Overruled.

Mr. Lewis E. Lyon: Not the best evidence.

The Court: Overruled.

The Witness: I believe they did.

Mr. Pruitt: I will offer this in evidence as Defendants' Exhibit M.



(Testimony of Robert R. Waters.)

The Court: It may be received.

Mr. Lewis E. Lyon: Objected to on the ground there is no proper foundation laid, your Honor.

The Court: Overruled.

The Clerk: M in evidence.

(The exhibit referred to was marked Defendants' Exhibit M, and was received in evidence.)

Q. By Mr. Pruitt: Calling your attention to Defendants' Exhibit N, I ask you to state whether or not in 1950 you saw a catalog of the Sigmund Cohn Corporation, which is similar to that exhibit?

Mr. Lewis E. Lyon: Same objection, your Honor.

The Court: Overruled.

The Witness: Yes, I believe the information was similar to this one.

Q. By Mr. Pruitt: Did the catalog that you saw on or about that date have material concerning platinum and platinum alloy resistance wires contained in said catalog?

Mr. Lewis E. Lyon: Same objection, your Honor, on the ground the catalogs themselves are the best evidence.

The Court: Overruled.

The Witness: It did.

Mr. Pruitt: I offer this Sigmund Cohn catalog as Defendants' exhibit next in order.

The Court: It may be received.

The Clerk: Exhibit N in evidence.

(The exhibit referred to was marked Defendants' Exhibit N, and was received in evidence.)

(Testimony of Robert R. Waters.)

Q. By Mr. Pruitt: In December 1950 and thereafter, Mr. Waters, did you have any conversations with suppliers of potentiometers relating to the sources of supply of various component materials used in potentiometers? A. We did.

Q. And did you discuss such matters with representatives of Edcliff Instruments?

A. Yes, sir, we did.

Q. Did Mr. Bourns, or any representative of Mr. Bourns, ever tell you not to reveal the names of the suppliers of the materials which he used in his potentiometers?

Mr. Lewis E. Lyon: That is objected to, your Honor, as assuming a fact on which there is no evidence.

The Court: The objection is sustained. I don't see where the fact that he didn't warn him will excuse an employee from disclosing it. This man wasn't employed by him. He was a contractor dealing with him at arm's length and owed a different kind of duty than others.

Mr. Pruitt: I understand that. I think it is material to the fact of whether or not he considered it to be a trade secret at that time. He is claiming now that the use of these materials were trade secrets. And I think it is material——

The Court: That relates as between him and his employees. It may not be as to them. [478]

Q. By Mr. Pruitt: At or about December 1950 and thereafter, Mr. Waters, did the sales repre-

(Testimony of Robert R. Waters.)

sentatives of various suppliers call on you from time to time?      A. They did.

Q. And did the sales representatives represent companies which supplied component materials for potentiometer manufacture?      A. Yes.

Q. At any time did you direct the sales representatives of these suppliers to your suppliers for potentiometers?

A. Yes, sir, we made a practice of making certain that our instrument suppliers knew of any sources that we might know of for quality materials.

Q. Did you ever direct any of the sales representatives to the defendant Edcliff Instruments?

A. I am certain that we did.

Q. Specifically did you recommend to Mr. Adolph Cohn to visit Edcliff Instruments?

Mr. Lewis E. Lyon: That is objected to as leading, your Honor.

The Court: Overruled.

The Witness: There was a Mr. Cohn, which one I don't remember, I think there are two or three, that came to visit us and we told him of Edcliff Instruments, among many other instrument companies that we were buying parts from, [479] that we would recommend that he contact.

Q. Do you know what company Mr. Cohn represented?      A. The Sigmund Cohn Company.

Q. Mr. Waters, in your experience as an electrical engineer, do you know of any other fields of activities in which potentiometers of the same ac-

(Testimony of Robert R. Waters.)

curacy as you use in your missile program are required?      A. Yes, sir.

Q. Will you state them, please?

A. Computing devices, used in radar, gunfire directors, auto-pilots, various types of automatic control systems, and other related fields.

Mr. Pruitt: I have no further questions, your Honor. [480]

Cross Examination

Q. By Mr. Lewis E. Lyon: You say that some representative of Edcliff Instruments called upon you on or about December 15, 1950, and you are not certain whether it was Mr. Dillon or Mr. Edcliff. Is that correct?

A. You mean Mr. Dillon or Mr. Pitzer?

Q. Or Mr. Pitzer.

A. The gentlemen very often visited us together.

Q. Just answer the question, please.

A. The answer is, I do not remember which person.

Q. Do you remember that it was not both of them together?

A. I do not remember that.

Q. Do you remember what potentiometers they had with them at the time they called upon you in December of 1950?

A. I believe that they had samples of their—sample designs, or mechanisms, of their mechanical set-up.

Q. Of their what?

(Testimony of Robert R. Waters.)

A. Their mechanical design of the potentiometers.

Q. Which potentiometers were those?

A. These were potentiometers which are not in evidence anywhere here, because they were merely designs.

Q. I see. Now, will you take this Exhibit 3, and look through it, and tell me which one of these mechanical designs [481] they exhibited to you at that time most nearly approached, or was exactly similar?

A. There are two or three which are sufficiently similar so that I don't believe I can differentiate between them.

Q. All right. Tell me which ones they are by plate numbers of Exhibit 3. You see the plate numbers?

A. Yes, sir. Plates 9, 16, 17, and 20, I believe.

Q. All right. Did they have four such devices with them?

A. They did not.

Q. How many did they have?

A. They had—I wouldn't say that they had devices with them. They either had the devices or designs for the devices, and I believe they had one, or perhaps two.

Q. One or perhaps two designs of the devices?

A. Correct.

Q. Which was it?

A. As I said, I could not tell you whether they were specific mechanical devices, or whether they



(Testimony of Robert R. Waters.)

were merely a demonstration of the design of the device.

Q. Didn't they have some actual prototypes with them, in their possession at that time, and demonstrate them to you?

A. If there was a prototype, it was strictly of the sliding mechanism. The reason I picked those models is because [482] I, in particular, remember the square shaft idea, and that was the thing that was similar in those four plates.

Q. Now, do you know, and does your examination of the records of Douglas Aircraft show you when models or prototypes were submitted by Bourns Laboratories to Douglas?

A. I am certain that the records do show that.

Q. Well, have you made an examination of it?

A. No, sir, I have not.

Q. Do you know when Bourns submitted Model 114 to Douglas Aircraft?

A. Which model was that, sir? Which design?

Q. Well, let's look at Exhibit 3 again, and see if you can identify that by Plate No. 10.

A. That is a potentiometer very much like that, that we bought one prototype of, I believe it was very early in 1951.

Q. Do you know when the design was submitted to Douglas?

A. This at that time was what you might call a shelf item. The part existed. It was the closest to the thing we were looking for, so we bought one for type testing.

(Testimony of Robert R. Waters.)

Q. I am asking you when the design was first submitted to you.

A. In very early 1951.

Q. It had not been submitted to you before that?

A. To my knowledge, no. [483]

Q. Are you familiar with this letter which I place in your hands? Did you find that one in the file?

A. At the time when the letter is dated, I was not responsible for this particular job.

Q. Well, I didn't ask you that.

A. Consequently, I did not receive that letter.

Q. You did not find that letter in the file?

A. That is correct.

Mr. Lewis E. Lyon: I will ask that the letter just handed the witness be marked for identification as Exhibit 41, for identification.

The Clerk: Plaintiff's Exhibit 41, marked for identification.

(The document referred to was marked Plaintiff's Exhibit 41, for identification.)

Q. By Mr. Lewis E. Lyon: When did you first become active in this field, if you were not active in the field on September 25, of 1950?

A. I assumed responsibility in this field on, roughly, December 10th or 11th, of 1950, although I had had some testing assistance to my predecessor before that.

The Court: You took over your duties in that respect on that day in December?

The Witness: Yes.

(Testimony of Robert R. Waters.)

Q. By Mr. Lewis E. Lyon: This letter was written to Mr. [484] Walter Shavell? By "this letter," I mean Exhibit 41, for identification. Who was Mr. Shavell?

A. Mr. Shavell was my supervisor when I went to Douglas in June of 1950.

Q. Was he still connected with this department in December of 1950?

A. He was connected up until, I believe, the 31st of December, 1950.

Q. And is he still with Douglas?

A. No, sir, he is working for Giannini, Inc.

Q. Do you recall having a conversation with Mr. Bourns about this December visit from Mr. Edcliff some time ago?      A. From Mr. whom?

Q. What is that? Mr. Bourns.

A. A visit from Mr. Edcliff.

Q. No, about your visit from Mr. Dillon and Mr. Pitzer in December of 1950?

A. I cannot say whether I actually spoke to Mr. Bourns about the matter. I was aware that the gentlemen had been associated.

Q. I am asking you, did Mr. Bourns call you with respect to Mr. Dillon's and Mr. Pitzer's visit to you at Douglas in December of 1950?

A. Are you referring to a call recently?

Q. Yes. [485]      A. He did.

Q. When was it recently that this conversation was had?      A. Within the last week.

Q. Within the last week. Did you fix the date

(Testimony of Robert R. Waters.)

of that visit at that time in that conversation with Mr. Bourns as on or about December 15, 1950?

A. No, sir, I don't believe I fixed a date. If I did, I was estimating it.

Q. Now, this date of December 15, 1950—I believe you mentioned that—how did you fix that date?

A. I believe I said the 10th of December, or thereabouts, and that was the time at which I was returned to Santa Monica from New Mexico.

Q. I see. Now, this visit with Mr. Dillon or Mr. Pitzer, or both, at the Douglas plant was on or about the 10th of December, 1950?

A. It was following that date.

Q. Well, how long following it?

A. Precisely, I cannot remember. I believe it was within, let us say, one to two weeks.

Q. One to two weeks. And this same visit is the one we are talking about, when they had models, prototypes with them, and designs; is that correct?

A. Yes, sir.

Q. There was only one such visit in December, 1950, [486] was there?

A. That I cannot say.

Q. Only one that you recall?

A. Beginning with that date, there were many visits from the Edcliff Company, as well as many other companies, and it is impossible for me to remember which ones were before or after the 31st of December. It was almost constantly from there on out.

(Testimony of Robert R. Waters.)

Q. You had this telephone call from Mr. Bourns concerning this visit about a week ago. Will you tell me whether you told Mr. Bourns that whoever it was, Pitzer or Dillon, stated to you at the time of this first meeting in December of 1950, that he didn't want to show the instruments to Mr. Shavell, your supervisor at that time, because Mr. Shavell was leaving and might take the information to Giannini's?

A. I told Mr. Bourns that it was known to me, or made known to me, either by the people who visited, or by my supervisors, the person who supervised both Mr. Shavell and myself, that the gentleman asked specifically to see me, and the reason given to me was that they were aware that Mr. Shavell was changing employment, and, as such, it was not desirable to speak to Mr. Shavell; also, from the point of view that I would be the one having the responsibility, and, therefore, I would be the one to talk to.

Q. How long had you been out of school in December of [487] 1950?

A. Oh, roughly six months.

Q. In your work at Cal Tech had you had any opportunity to purchase materials for the construction of potentiometers?

A. No, sir.

Q. Had you ever been called upon to locate the sources of material for the production of potentiometers?

A. I had not.

Q. Had you had any reason for purchasing potentiometers, or for locating the sources of ma-



(Testimony of Robert R. Waters.)

materials for potentiometers until after this call upon you in December of 1950?

A. The only occasion for purchasing potentiometers was for my own use.

Q. Well, just answer the question, please.

A. Yes, sir.

Q. Your own uses where?

A. In my own work, for my own amusement. These potentiometers were not of the same nature which we are discussing.

Q. Of what nature were the potentiometers?

A. Strictly of what you might call the volume control type, which are used in conventional radio circuits.

Q. That is, in those conventional radio circuits, there is no particular accuracy required for any such potentiometer, is there? [488]

A. In general, that is correct.

Q. That is, if they are within 10 or 15 per cent of volume—I mean, of accuracy, that is O. K., isn't it?

A. I think that is probably it by the biggest percentage.

Q. And that is the only experience that you had had in the purchase of potentiometers or materials for potentiometers up until December 10th of 1950, isn't it?

A. That is correct.

Q. So that prior to December 10th of 1950 you had no reason for determining who manufactured wires, or contact elements, or other fine requirements for an accurate potentiometer, had you?

(Testimony of Robert R. Waters.)

A. Before, roughly, June of 1950, when I was first put into this work, and that was in a secondary capacity.

The Court: The witness stated, I think,—it is fair to the witness to say that he stated that prior to that time he had assisted Shavell, and that as his assistant he had learned about it, and in December he took over, and, of course, acquired the full knowledge necessary for one in authority. Isn't that what you said?

The Witness: That is correct, yes, sir.

Q. By Mr. Lewis E. Lyon: Now, prior to December 10, 1950, the potentiometers that you testified to were of whose manufacture? [489]

A. Many companies. Bourns Laboratories; Genesco, Inc.; Giannini, Inc.; Schwinn-Gyro Corporation; and a few others, perhaps, that I cannot think of.

Q. Were Bourns Laboratories' potentiometers purchased by Douglas Aircraft prior to December 10, 1950, for use in the guided missile field?

A. Yes, sir.

Q. Was there any other linear motion potentiometer purchased by Douglas Aircraft Company prior to December 10, 1950, for use in a guided missile program?

A. As a part of another instrument, yes, sir.

Q. A linear motion potentiometer?

A. That is correct.

Q. From whom?

A. From Genesco, Inc.

Q. And what other instrument was that?

(Testimony of Robert R. Waters.)

A. That was an accelerometer, an acceleration measuring device.

Q. It was some device used in accelerometers that were purchased by Douglas before that time?

A. That is right, sir.

Q. So far as separate potentiometers, linear motion potentiometers, Douglas had not purchased prior to December 10, 1950, linear motion potentiometers per se from anyone other than Bourns; is that correct? [490]

A. To my knowledge, that is correct.

Q. What were these accelerometers that you say were purchased between June of 1950 and December 10 of 1950 by Douglas used for, which included a linear motion potentiometer, by Douglas?

A. Did I understand the question, what were they used for?

Q. Yes.

A. For measuring acceleration in flight vehicles.

Q. In what type of flight vehicles?

A. In guided missiles. They were also used in aircraft.

Q. In what position?

A. I am sorry. I don't understand what you mean.

Q. Well, in what particular tests were they used in the guided missile for?

A. They were used for measuring the acceleration of the vehicle.

Q. What size were they?

A. That, I am sorry, I cannot remember. I mean

(Testimony of Robert R. Waters.)

I cannot state, because this is a classification. Do you mean physical size?

Q. Yes.

A. Or the electrical distances?

Q. Physical size. [491]

A. Physical size, they were perhaps 3 by 3 by 2, on that order.

Q. How do they compare in size requirements with this potentiometer, say, Exhibit 6, for identification?

A. The potentiometer portion was smaller.

Q. Smaller?

A. The over-all instrument was considerably larger.

Q. Does Douglas Aircraft still purchase linear motion potentiometers or instruments containing linear motion potentiometers from that company?

A. Yes, sir, they do. [492]

\* \* \* \* \*

### Redirect Examination

Q. By Mr. Pruitt: Mr. Waters, in 1950 while you were employed at Douglas Aircraft did you ever see a pamphlet a copy of which I now hand you?

A. During what period, sir?

Q. During the period 1950 while you were employed by [495] Douglas.

Mr. Lewis E. Lyon: What is the thing now offered to the witness? It is not redirect examination.

The Court: These gentlemen are not parties to the action; let's finish with them and send them home.

(Testimony of Robert R. Waters.)

Mr. Lewis E. Lyon: I want to find out what it is that is shown to him.

The Court: I don't know what it is that he is showing him. What is it? He hadn't answered. Let him answer whether he has seen it. Maybe he hasn't seen it.

The Witness: Yes, sir, I have seen that.

Q. By Mr. Pruitt: Did you read it during that period? A. Yes, sir, I did.

Q. And is this pamphlet, or a copy thereof, available to the persons in your department at Douglas Aircraft? A. Yes, sir, it is.

Mr. Pruitt: I will offer that document in evidence as defendants' next in order, your Honor.

The Court: We will certainly know enough about potentiometers before we get through, if we absorb all this evidence.

It may be received.

The Clerk: Defendants' O in evidence.

(The exhibit referred to was marked Defendants' Exhibit O, and was received in evidence.) [496]

\* \* \* \* \*

Mr. Pruitt: Your Honor, I was informed by Mr. Lyon this morning that they will dismiss, or through some other method remove the '980 patent issues from this matter.

The Court: There is only one cause of action, so it isn't a case of dismissing; it is merely saying that they are not urging it, that is all.

Mr. Pruitt: Yes. There are several agreements



that we have arrived at with respect to the conditions under which that will be done, and I am wondering if the court cares to listen to my suggestion with respect to the manner in which mechanically the court can carry out our agreement.

The Court: It is all right with me. I am always glad to hear counsel's suggestions to simplify procedures.

Mr. Pruitt: In addition to the plaintiff's first cause of action for patent infringement of both patents, there is a Count Four of the counterclaims asking for declaratory relief with respect to the '980 patent, and with respect to the '981 patent. As I understand it from Mr. Lyon, they will not claim that the present C-3 instrument manufactured by the defendant infringes the '980 patent. I understand that it is their position that the C-1 and C-2 instruments do infringe; but the defendants are no longer manufacturing [500] either of those devices, do not intend to resume manufacturing either of those two devices, and we will agree that we will not manufacture either of those two devices.

The Court: Gentlemen, there is one thing I want to tell you. Regardless of any agreement, I am not going to undertake to adjudicate the same problem under your counterclaim. So if they dismiss as to that, you will have to dismiss the declaratory judgment, because it doesn't help.

Mr. Lewis E. Lyon: That is the agreement, your Honor, that we dismiss on their agreement not to make the C-1 and C-2.

The Court: They make no claim, then, and you will not press your counterclaim. Because under declaratory judgment I can give exactly the same thing as before, except as to the form of relief.

Mr. Lewis E. Lyon: Well, all counterclaims based on the '980 patent, it is our understanding will be not urged, the same as we agree not to urge our charge of infringement, and the counterclaims are not only declaratory relief, but also a claim of false marking, which also will go out on the same proposition.

The Court: That is all right. That is agreeable, then.

Mr. Pruitt: I just wanted it clear on the record that our present C-3 instrument is not claimed to infringe, and I thought possibly a provision in the judgment would be [501] satisfactory.

The Court: That is all right. Anything you agree as to a particular device is all right with me. [502]

Mr. Pruitt: I also, of course, want to reserve the right to make my position clear, that I still insist the '980 file wrapper is relevant to the question of validity and the proper interpretation of the single claim of the '981 patent.

The Court: That is a question of argument. As a matter of fact, in one of my earliest patent cases I became convinced that the file wrapper has a good deal of bearing. That was in the Joyce patent. That is a shoe patent, where a single claim had been awarded, and where Mr. Joyce, in my opinion, was trying to recapture what he had lost by claiming all platform shoes, which were old in the art, three or

four hundred years anyway. The Chinese had used platform shoes for centuries, and he had claimed all platform shoes.

So ordinarily I have no objection to having the file wrapper in if counsel thinks that it bears upon the subject. Ultimately, if it does not, I just don't need to read it. That is all there is to it.

Mr. Lewis E. Lyon: We have not objected, your Honor, to the file wrapper of the first patent.

The Court: So if you want to, you may offer it for whatever it is worth. I don't like to encumber the record, or make a record that is larger than necessary.

Mr. Lewis E. Lyon: Now, it is also my understanding, and I don't know whether the record now states it, that [503] counter-claims 1 and 2 are also to be dismissed.

Mr. Pruitt: Yes, I will state now for the record that the counter-claimants will offer to dismiss at this time all of the counter-claims set forth in the amended counter-claims with the exception of the declaratory relief action, in so far as it relates to the '981 patent. I think that is important.

The Court: What declaratory relief can you ask? They are alleging that it is valid and infringed, and you allege it is invalid, or if it is valid you want to narrow it so you will not infringe. What more could you obtain by declaratory relief?

You want to bear in mind that I was one of the first District Judges in the country to apply declaratory relief to a mere declaration of liability or

non-liability, you see, but I cannot see what more you could obtain through the declaration than any judgment adjudicating the merits. We are no longer working under that old case where if you find there was no infringement, you do not have to decide whether the patent is valid. The Supreme Court has either repudiated that statement, or, as they usually say, have said, "We misunderstood." At any rate, that is the rule now. So what more could I declare by a declaration that I could not declare by a judgment on the merits?

Mr. Pruitt: Your Honor, it will appear from the evidence that certain of the instruments which are claimed to infringe [504] were sold only to the United States Government or to its contractors.

The Court: I have already ruled that only affects the question of damages. It does not affect the power of the court. I determined that, and I remember all of the argument.

You urged that as a ground for dismissing the action, and I said that may merely affect the right to determine damages. It does not determine the right of the court.

Mr. Pruitt: I didn't argue it extensively at that time.

The Court: Extensive argument does not help in this court. If that did not impress me then, it does not impress me now. You certainly have had extensive argument with 194 pages in a brief.

Mr. Pruitt: I want to call your attention to certain authorities on that, and I want to be heard for a moment on that question.



The Court: I will not hear you now. We will argue it later.

Mr. Pruitt: I just wanted to state why I didn't dismiss the declaratory relief action.

Mr. Lewis E. Lyon: As I understand, you are dismissing the counter-claims, with the exception of the declaratory relief action with respect to the '981 patent?

Mr. Pruitt: That is right. [505]

The Court: You are a young man, and are looking at it from a peculiar stand point. Your attitude is the most fantastic there is. It shows youth. In other words, here is your chance to have a court determine an issue, and you try to resort to a statute and make it mean what I say it does not mean, because the Congress has not deprived us of jurisdiction in patent litigation by that provision. It merely said that when there is infringement and somebody claims damages, the man should go to the Court of Claims.

Mr. Pruitt: And sue the Government, your Honor, and not the claimed infringer.

The Court: All right. But that does not deprive me of the right to say that this patent is good and you are infringing it, even if I deny you damages. You cannot show me any law which says that by that section I am ousted from jurisdiction, because there is no such law.

Mr. Pruitt: Your Honor, I thought there was some doubt about it, and that is the reason——

The Court: There is no doubt in my mind. I have ruled on it before. That is not new. I have in-



terpreted that before. That section has been there for years. I am not wasting judicial time after I take jurisdiction of a case, and have spent six days and probably will spend ten days, by throwing it out on a technicality. It is going to be decided on the merits, and even if I cannot decide damages, I am going to decide whether this patent is good, and whether you are infringing it. [506]

Mr. Pruitt: I hope you do, your Honor. I agree wholeheartedly.

The Court: All right. That is all there is. There used to be a time when patent lawyers—your firm is not a patent firm—were interested more in a determination. Now they have gotten so they are just like other lawyers, they try to postpone the day, instead of getting an adjudication.

I wouldn't take all this time if I felt that there was any question about my jurisdiction. After all, you have argued all sorts of motions in this case for a period of six months.

Mr. Pruitt: Yes, your Honor.

The Court: All right.

Mr. Pruitt: I will offer at this time a certified copy of the file wrapper and contents in the matter of the Bourns patent No. 2,515,980, and ask that this be admitted as defendants' next in order.

The Clerk: Is this admitted, your Honor?

The Court: It may be received.

The Clerk: Defendants' P in evidence.

(The exhibit referred to was marked Defendants' Exhibit P, and was received in evidence.)

[See Book of Exhibits.]

Mr. Pruitt: I offer in evidence a certified copy of the file wrapper and contents of the Bourns patent No. 2,515,981, and ask that that be received as defendants' next [507] in order.

The Clerk: Is this admitted, your Honor?

The Court: Yes.

The Clerk: Defendants' Q in evidence.

(The exhibit referred to was marked Defendants' Exhibit Q, and was received in evidence.)

[See Book of Exhibits.]

Mr. Pruitt: Your Honor, in order to save time I can offer these prior art patents relating to the '981 patent by reference to the exhibit previously filed, and we will offer loose copies to be marked as defendants' next in order.

The Court: All right.

The Clerk: R in evidence.

(The exhibit referred to was marked Defendants' Exhibit R, and was received in evidence.)

[See Book of Exhibits.]

The Court: Are you relying on the whole list?

Mr. Pruitt: Just on the ones relied on in support of the '981 patent.

Mr. Lewis E. Lyon: Which ones are those?

Mr. Pruitt: I will identify them at this time.

The Clerk: Exhibit R.

Mr. Pruitt: R-1, the H. W. Rubinstein patent No. 2,242,327, issued May 20, 1941;

-2, W. E. Schauer patent, No. 2,280,305, issued April 21, 1942;

-3, W. J. Thayer patent, No. 1,660,979, issued February [508] 28, 1928;

-4, H. W. Rubinstein patent, No. 2,178,241, issued October 31, 1939;

-5, H. W. Batcheller, patent No. 2,306,152, issued December 22, 1942;

-6, J. M. Aufiero, patent No. 2,420,807, issued May 20, 1947;

-7, H. A. Keip, patent No. 954,518, issued April 12, 1910;

-8, B. H. Campbell, patent No. 2,125,219, issued July 26, 1938;

-9, C. O. Nelson, patent No. 2,273,760, issued February 17, 1942;

-10, M. W. Newton, patent No. 1,004,460, issued September 26, 1911;

-11, C. E. Mountford, patent No. 1,539,266, issued May 26, 1925.

I will call Mr. Dillon, please.

### CLIFFORD C. DILLON

called as a witness by the defendants, being first sworn, was examined and testified as follows: [509]

\* \* \* \* \*

#### Direct Examination

Q. By Mr. Pruitt: Mr. Dillon, on or about what date did you make your first sale of a potentiometer? A. March or April of 1951.

Q. And to whom did you make that sale?

A. Naval Ordnance Test Station in Pasadena.

Q. How many instruments were involved in that sale? A. Six.

(Testimony of Clifford C. Dillon.)

Q. When was your next sale of potentiometers in 1951?      A. Very shortly after that.

Q. To whom?      A. Douglas Aircraft.

Q. And what type of instrument did that involve?      A. An E-1.

Q. How many instruments were sold at that time?      A. Six.

Q. Thereafter did you make any further sales of [525] potentiometers to NOTS, Pasadena?

A. No.

Q. Did you sell them some accelerometers that year?      A. Yes.

Q. At any time since that date have you sold Naval Ordnance Test Station in Pasadena any linear motion potentiometers?      A. No.

Q. Did you ever sell any potentiometers to Consolidated Vultee Aircraft, or Convair?

A. Yes.

Q. On or about what date did you make your first sale to that company?

A. Just a little bit more than a year ago.

Q. Did you ever sell linear motion potentiometers to North American Aviation?

A. Yes.

Q. On or about what date did you make your first sale to that company?

A. I believe it was in '52, late '52.

The Court: You said you sold them to North American Aviation; do you know on what they used the potentiometer, whether on missiles or in airplanes, or jets, or on what?

(Testimony of Clifford C. Dillon.)

The Witness: In this particular case it was used on an airplane. [526]

The Court: The only ones that you are certain they used on Government instrumentalities are those that you sell to the Navy direct, is that true?

The Witness: No. If we have a Government contract number on the purchase order, then we know it is going into a Government project.

The Court: But you are selling to others, such as North American Aviation and Douglas, for uses other than Government contracts, are you not?

The Witness: I don't believe so, sir.

The Court: You just told me that North American Aviation used it on ordinary airplanes.

The Witness: That would be for a Government contract, though, in this case, sir.

The Court: Can't yours be used on any other airplanes, airplanes constructed for aviation companies?

The Witness: They could be.

The Court: Do you know whether they are?

The Witness: None that we make at the present time or being so used.

The Court: All right.

Q. By Mr. Pruitt: When was your first sale of an instrument to Bendix Aviation? When did you receive a purchase order?

A. Late in '51. [527]

Mr. Pruitt: What was the answer, please?

(Answer read by the reporter.)

Q. By Mr. Pruitt: From that date to the pres-



(Testimony of Clifford C. Dillon.)

ent, Mr. Dillon, what company has been your principal customer as far as potentiometers are concerned?      A. Bendix Aviation.

Q. What model instrument has been purchased by Bendix Aviation?      A. Our Model D-1.

Q. I show you now Defendants' Exhibit I for identification, and ask you if that is the instrument you refer to?      A. Yes.

Mr. Pruitt: I note this exhibit is only in for identification, your Honor. I offer it in evidence at this time.

The Court: It may be received.

The Clerk: I in evidence.

(The exhibit referred to was marked Defendants' Exhibit I, and was received in evidence.)

Q. By Mr. Pruitt: Mr. Dillon, I show you Plaintiff's Exhibit 3 and ask you to go through that folder and testify which, if any, of the Edcliff models illustrated therein have never been sold by Edcliff?

The Court: They begin with 6, don't they?

The Witness: Yes.

Plate 8. [528]

Q. By Mr. Pruitt: 8 is the model designated A-P1?      A. Yes.

The Court: But are you manufacturing it?

The Witness: No.

The Court: Did you ever? Did you start and then abandon it, or what? Or did you make an experimental model, or what?

(Testimony of Clifford C. Dillon.)

The Witness: Experimental model.

Q. By Mr. Pruitt: Is the model that you are referring to Plaintiff's Exhibit 28? A. Yes.

Q. That is the only one that was made of that instrument?

A. This particular design? No. We made six others.

Q. Of the A-P1?

A. Not of the A-P1, but of that instrument there.

Q. Were any of those sold? A. Six.

Q. To whom did you sell those instruments?

A. NOTS.

Q. And that is the sale you mentioned in March of 1951? A. Yes.

Q. Will you continue to look through that folder, Mr. Dillon? [529]

A. Yes. Plate 14, plate 16.

The Court: I lost track. We started with those that you didn't manufacture and now you are telling me those that you did manufacture and sell?

The Witness: No, sir. No, your Honor. Plate 16 we did not manufacture; plate 14 we did not.

The Court: Whatever exhibits of that that are in the record are merely experimental models?

I am trying to summarize your testimony, because it is hard to keep track of figures and models.

Mr. Lewis E. Lyon: I can't understand it. We have just shown one in his hand, and he said he didn't manufacture it. I am somewhat confused, too.

(Testimony of Clifford C. Dillon.)

Q. By Mr. Pruitt: The A-P1 that you identified, Mr. Dillon, is it similar to any other model that you later manufactured and sold?

A. Yes.

Q. Will you identify the plate in Plaintiff's Exhibit 3 which shows the instrument which you manufactured and sold? A. Plate 9.

Q. Calling your attention to plate 14, I show you now an incomplete model which is marked XP, and ask you if that is the same instrument depicted at plate 14, Plaintiff's Exhibit 3? [530]

A. Yes.

Q. Was this instrument ever sold by Edcliff?

A. No.

Q. What were the circumstances under which XP was manufactured by Edcliff.

A. It was to show the engineers at Douglas that we could put the elements for a triple pot such as this all in one cover.

Q. And about what date was that manufactured?

A. Early in '51, about the same time as we were working on the E's, very shortly after.

Mr. Pruitt: I offer this model in evidence, your Honor, as defendants' next in order.

The Clerk: Is this admitted, your Honor?

The Court: It may be received.

The Clerk: Defendants' Exhibit T in evidence.

(The exhibit referred to was marked Defendants' Exhibit T, and was received in evidence.)

Mr. Pruitt: I ask that the clerk mark this in-

(Testimony of Clifford C. Dillon.)

strument for identification as defendants' next in order.

The Clerk: Defendants' U marked for identification.

(The exhibit referred to was marked Defendants' Exhibit U, for identification.)

Q. By Mr. Pruitt: Mr. Dillon, I show you an instrument which has been marked as Defendants' Exhibit U, for [531] identification, and ask you if you can identify that instrument?

A. It is a Model B-1.

Q. And is that model found by you in Plaintiff's Exhibit 3?

A. In several forms, essentially. Here is essentially part of it (indicating).

Q. You are referring to plate 12?

A. Yes.

Q. Is plate 12 the first model similar to the "B" that was made by Edcliff?

A. Plate 16 is the first model. Similar to "B" yes, plate 12.

Q. On or about what date was the model B-1 first sold by Edcliff?

A. '52, around the first of the summer.

Q. '52? A. Yes.

Q. Mr. Dillon, when did you first contact a prospective customer in connection with an attempted sale of a potentiometer?

A. We first contacted a potential customer in December. [532]

Q. Of what year? A. 1950.

(Testimony of Clifford C. Dillon.)

Q. And what company did you call upon at that time?           A. Douglas Aircraft.

Q. Did you call upon any particular person at Douglas Aircraft?           A. Mr. Bush.

Q. What position did Mr. Bush have with that company at that time?

A. He was the supervisor in charge of flight test.

Q. And who was Mr. Bush? Had you known Mr. Bush prior to the time of this visit?

A. He was a friend of Ed Pitzer's.

Q. And who was present at the time you saw Mr. Bush on the occasion of that visit?

A. Mr. Bush took us into the testing lab and introduced us to the group supervisor in charge of the lab.

Q. And who was "us", Mr. Dillon?

A. Mr. Pitzer and myself.

Q. Did you have a conversation with the person in the testing lab?           A. Yes.

Q. What was the substance of that conversation?

Mr. Lewis E. Lyon: Find out who the person was.

The Witness: He was a group supervisor in charge of [532-A] testing.

Q. By Mr. Pruitt: Do you remember the name of the group supervisor?

A. I am not sure of it now.

Q. Who else was present at that time?

A. Besides Ed Pitzer and myself?



(Testimony of Clifford C. Dillon.)

Q. Yes.

A. Mr. Bush was present to begin with, and he left us in the hands of the group supervisor.

Q. What was the substance of the conversation that was had at that time and place?

A. Mr. Bush told him that we were interested in seeing what kind of work was available at Douglas that we could do, and that if he could be of any help to us, he would appreciate it.

He then suggested that we should go see somebody in engineering, and said that a Mr. Waters was in charge of instrumentation on the missile program, and that he would take us and introduce us to Mr. Waters.

Q. Did he do that?           A. He did.

Q. Did you have a conversation with Mr. Waters on that same date?           A. Yes, I did.

Q. Who else was present at the time of that conversation? [533]

A. Herb Aldinger, and Ed Pitzer was there, but I carried on the conversation with Mr. Waters.

Q. Do you know what position Herb Aldinger has at Douglas Aircraft?

A. At present, no.

Q. At that time?

A. At the time he was assistant to Mr. Waters.

Q. What was the substance of the conversation at that time and place?

A. We indicated that we would be interested, again, in getting into the instrument field, and if there was any opportunity. And he said that there

(Testimony of Clifford C. Dillon.)

definitely was, they were looking for more than one source,—two sources, if they could find them, or possibly more than that; that they wanted people to come in to create competition to reduce the price on the instrument that they were using.

Q. At that time did you have any models of instruments with you?      A. Two.

Q. I show you Plaintiff's Exhibit 28, and ask you if that was one of the models that was shown to Mr. Waters on the occasion of that conversation.

A. No, not this exact one.

Q. Was it similar to this one? [534]

A. Similar, yes.

Q. Did you have another type of model there at that time?

A. Yes, we had a model B.

Q. As a result of that meeting with Mr. Waters did you receive any order from Douglas for the production of potentiometers?

A. Not as a result of that meeting.

Q. What was the next contact you had with Douglas relating to the manufacture by you of potentiometers?

A. The next contact, I went back to see Mr. Waters, and he took me to the hydraulics group, where they were doing design work on future requirements.

It was at that time that we also discussed the model C, and the unit that you showed here a while ago with the three elements in one cover.

(Testimony of Clifford C. Dillon.)

Q. The latter instrument you are referring to is Defendants' Exhibit I? A. Yes.

Q. At or about what date was that contact made, Mr. Dillon?

The Clerk: That was Exhibit T.

Mr. Pruitt: T?

The Clerk: Yes.

Mr. Pruitt: Exhibit T. Pardon me. [535]

The Witness: Sometime in February or March of 1951.

Q. By Mr. Pruitt: At that time did you have discussions with any engineer at Douglas with respect to the purchase of the model E-1 instruments from you? A. Yes.

Q. Did you have a conversation with Mr. Simonick on that subject? A. Yes.

Q. What did Mr. Simonick say in connection with the production of that instrument?

A. The production of E-1?

Q. E-1.

A. That it would probably not be a production unit, but they needed it for test equipment.

Q. Did he ask you to prepare suggested drawings to submit prior to the commencement of manufacturing? A. Yes.

Q. And did you do that? A. Yes.

Q. Did Mr. Simonick examine the drawings in your presence? A. Yes.

Q. Did he make any suggestions with respect to the manner, or of any changes that should be made in the instrument? [536]

(Testimony of Clifford C. Dillon.)

A. I think one change that was discussed was the type of mounting arrangement we would use in that particular unit.

Q. At the time of your original discussion with Mr. Simonick with respect to the model E-1, did he tell you the external dimensions of the body member of the instrument?

A. I think that they spelled that out for us, yes. [537]

\* \* \* \* \*

Q. By Mr. Pruitt: Mr. Dillon, I show you a drawing, which is Plaintiff's Exhibit 33 in evidence, and ask you to look at that, please.

I now hand you the instrument which has been marked as Defendants' Exhibit V, for identification, and ask you to examine that instrument please. Have you examined those matters, Mr. Dillon? A. Yes.

Q. Does the instrument which you have just examined represent the same instrument as is drawn in Plaintiff's Exhibit 33? A. Yes. [552]

Q. And what model instrument is that?

A. B-11.

Q. And is that instrument manufactured by you? A. Yes.

Mr. Pruitt: I will offer the instrument in evidence as Defendants' Exhibit V, your Honor.

Mr. Lewis E. Lyon: Objected to, your Honor, on the ground there is no proper foundation laid as to time or anything else with respect to this matter. It may be something that was made today.

(Testimony of Clifford C. Dillon.)

Q. By Mr. Pruitt: When was the instrument first manufactured by you, Mr. Dillon?

A. In April or May.

Q. And did you sell one of those instruments——

Mr. Lewis E. Lyon: What year?

The Witness: This year.

Q. By Mr. Pruitt: Did you sell one or more of those instruments at or about that date?

A. Yes.

Mr. Pruitt: I will renew the offer, your Honor.

The Court: All right. It may be received.

The Clerk: V in evidence. [553]

\* \* \* \* \*

Q. Mr. Dillon, when was the first sale of any instrument manufactured by you sold to Convair?

A. Last year; in May or June, I believe.

Q. Will you state the circumstances under which you procured an order for the sale of potentiometers to Convair at or about that time?

A. In the very early months of 1953 we were contacted by an engineer from Bendix Aviation Corporation. They requested that we forward a Model F to their sales representative at Convair, that they would like to have it out for Convair's evaluation purposes.

I followed this up approximately a month and a half later, and talked to Engineering at Convair. They had been very satisfied with the report of the test on the instrument, and were anxious to have us enter into the field of their requirements. From



(Testimony of Clifford C. Dillon.)

that conversation we submitted drawings, and proposals, and were later given an order. [556]

\* \* \* \* \*

Q. By Mr. Pruitt: Mr. Dillon, I hand you Defendants' Exhibit Y, for identification, and ask you to describe what that document purports to reveal. [559]

A. This document is a list of all the instruments sold to the different organizations, by their model number and quantity of each sold to those organizations.

Q. And when was the date of your first sale of a potentiometer? A. In 1951.

Q. At or about what date or month in 1951?

A. Around April.

Q. And does this schedule continue from at or about April, 1951, up until a current date?

A. Yes, up until June of this year.

Q. Now, was this schedule prepared under your direction or supervision?

A. Yes, it was prepared by my secretary under my direction.

Q. Was the information therein contained based upon records kept by Edcliff in the ordinary course of its business? A. Yes.

Q. What basic vouchers were used in the preparation of this schedule?

A. Purchase orders.

Q. That is, purchase orders received from the various customers listed on the schedule?

A. Yes.

(Testimony of Clifford C. Dillon.)

Mr. Pruitt: I will offer this, your Honor, as the [560] Defendants' next in order.

Mr. Lewis E. Lyon: We object to it on the ground it has not been properly proven or identified, no proper foundation.

The Court: It is evidently a summary made from the books showing sales. Overruled.

The Clerk: Y in evidence.

(The document referred to was marked Defendants' Exhibit Y, and was received in evidence.) [561]

[See Book of Exhibits.]

\* \* \* \* \*

The Court: I don't know why this elaborate examination, which is argumentative, with a lot of emotion in the voice, or that it is leading to anything. These men have admitted—they claim the patent is invalid, and there has been no contention by them that they invented anything. They claim it is invalid, and, therefore, they took it. So until there is proof of a claim that they invented it themselves, [582] it seems to me that all this insistence as to how they started in business is not material.

They say they deliberately started in business to make this. Neither of them is an engineer. This witness is a salesman, and the other is a machinist. So I can't see why so much time is being taken to argue with him. You are arguing with the witness, and what difference does it make if it was on the 9th or the 15th? What difference does it make

(Testimony of Clifford C. Dillon.)

whether he was still with the Acme Saw Company or not? They are not parties to this action.

Mr. Lewis E. Lyon: Well, if your Honor is satisfied——

The Court: Supposing Pitzer was still employed by Bourns while he was doing that. That wouldn't make any difference ultimately on the infringement, and would not bear on unfair competition, either.

I cannot see the purpose of this elaborate emotional examination, going back and forth to a particular date, and whether it was a Saturday or a Monday.

You have got in evidence the fact that they went into this business, and they went to making potentiometers. They are not claiming that they invented anything. They are not claiming they have a patent. So far they have admitted they imitated, but they claim it is an invalid patent.

So what is the object of this minute examination over a date? [583]

Mr. Lewis E. Lyon: It is to establish those facts, your Honor, which your Honor has so clearly in mind. That being true, I don't think there is any need to pursue it.

The Court: There is no claim by this man that they started out to make something out of their own ingenuity. There has been no such claim so far, and, certainly, it is not proper cross examination of this man. Their counsel are not objecting, but

(Testimony of Clifford C. Dillon.)

there ought to be some limit as to where we are going.

Furthermore, as I told you before, stealing customers is not unfair competition under the laws of California. That gives rise to a special action in the case, and this is practically the only State in the Union which has it. Incidentally, in the original opinion you will find some of the cases that I decided. One of them, the Avocado case. As I say, it is the only State in the Union other than Ohio that has that rule. It started out of the laundry route case. That originated in a peculiar way. It originated in an Appellate Division case in New York, which was later reversed. In the meantime our courts got stuck with this intermediate decision, and followed it.

You are entitled to injunctive relief, but it is not called unfair competition. It is not on that basis. It is called a violation of the relationship, to take a man's customers. But regardless of that, the particular date is not [584] so important. You have got the basic facts there. You have the invoices from which you can argue, but you are going back and forth, and back and forth. You have gone back over those dates from the beginning of November ten times, and I cannot see the importance of whether it was on a Monday or on Saturday afternoon, or whether he did it on his own time, or on Acme's time. [585]

\* \* \* \* \*

#### Cross Examination

Q. By Mr. Lewis E. Lyon: I place before you,



(Testimony of Clifford C. Dillon.)

Mr. Dillon, Exhibit V, which I understand is a "B-11" potentiometer of the Edcliff Instruments. I have taken—I don't know whether you would call this the cover or side plate—off from it. Which would you call it?

A. It would be called the cover, Mr. Lyon.

Q. (Continuing): ——to expose the insides. Now, neither the resistance element nor the shorting strip in the B-11 model, Exhibit V, is mounted in the cover, is it?

A. That is right, sir.

Q. In that instrument, the way in which the contacts are connected to the resistance element, and to the shorting strip, is by little fine wires which are soldered to the bottom of the contact elements, isn't that correct?

A. To the bottom of the feed through terminals.

Q. And the wound resistance element in the B-11 structure is mounted on a piece which is inserted in the [586] body, is it not?

A. Yes, Mr. Lyon.

Q. And that element which carries the resistance element is secured to the body how—by means of the two little screws that you see?

A. No, sir. That is cemented in there.

Q. Cemented in?           A. Yes.

Q. Now, we are looking at one side with what you called the cover off, and looking straight at the face of the wound resistance element, is that true?

A. Straight at the side——

Q. Straight at the face or side?



(Testimony of Clifford C. Dillon.)

A. Side, yes, sir.

Q. All right. Now, on the other side of that inserted bar or piece which is cemented in position in the body is the shorting strip? A. Yes.

Q. And the two little contact elements which are carried by the post, which slides in the body, bridge between the resistance element which we have just positioned and the shorting strip which is on the other side of that bar which is cemented in the body, isn't it? A. Yes, sir.

Q. You state that this B-11 potentiometer, Exhibit [587] V, was first made when?

A. In April or May, I believe, sir.

Q. Of this year? A. Yes, sir.

Q. And submitted, was it not, to North American Aviation? A. Yes, sir.

Q. Were any of them sold to North American Aviation? A. Yes, sir.

Q. On a test sale?

A. I don't understand your terminology of test sale, Mr. Lyon.

Q. Did they put them in test to determine whether they were satisfactory, to your knowledge?

A. I believe they did, yes, Mr. Lyon.

Q. And you endeavored to sell this particular B-11 on an order to them? A. Yes, sir.

Q. And you didn't get the order, did you?

A. No, sir.

Mr. Lewis E. Lyon: I will ask that the B-11 sample be put together again.

Q. By Mr. Lewis E. Lyon: In fact, to your

(Testimony of Clifford C. Dillon.)

knowledge that order was given to Bourns Laboratories for the standard type of potentiometer where the shorting strip and the wound [588] resistance element were mounted in the cover of the potentiometer, isn't that true?           A. No, sir.

Q. You don't know whether it was or not?

A. No, sir.

Q. Is that what you mean?

A. That is what I mean, sir.

Mr. Lewis E. Lyon: I will state for the record at this time, your Honor, so that there may be no misunderstanding on the subject matter, that as far as the B-11 instrument is concerned, we do not claim that that instrument is one copied from Bourns Laboratories, or that it comes under the patent in suit. We are making no such claim, nor have we at any time. \* \* \* \* \* [589]

Q. By Mr. Lewis E. Lyon: This summary, Exhibit Y, was prepared by your secretary, was it?

A. At my direction, yes, sir.

Q. And the information that is compiled in there was taken from your books, was it?

A. From purchase orders.

Q. From purchase orders?           A. Yes, sir.

Q. And the information that is tabulated on here of the purchase order numbers is the information which is shown on those purchase orders, is it?

A. Yes, sir. [596]

Q. Now, your secretary, then, separated these orders, did she, and endeavored to classify these

(Testimony of Clifford C. Dillon.)

different sales in the manner in which the classification of Exhibit Y is made; is that true?

A. Yes, sir.

Q. And the total material that she had to make these separations into different classes was the material which is set forth in Exhibit Y, and that is all, isn't it?

A. Working with me, sir, yes.

Q. And as far as a purchase order which states 306YX1815-53, does that give you any indication at all as to what use is to be made of the equipment?

A. That particular number probably doesn't Mr. Lyon, but the other accompanying information possibly would.

Q. And the information that is set forth in this tabulation with reference to these purchase order numbers, quantities, and the customers is what is contained on the purchase orders, is it not?

A. Would you repeat that question, please, Mr. Lyon?

Mr. Pruitt: Please speak out, Mr. Dillon.

The Witness: I would like to have that question repeated.

Mr. Lewis E. Lyon: Yes. If the reporter will please read the question.

(The question was read.) [597]

The Witness: Yes, sir.

Q. By Mr. Lewis E. Lyon: And that is true throughout this compilation in Exhibit Y; is that true?

A. Yes, sir.

Mr. Lewis E. Lyon: That is all.

(Testimony of Clifford C. Dillon.)

The Court: Any redirect?

Mr. Pruitt: One question, your Honor.

### Redirect Examination

By Mr. Pruitt:

Q. In connection with the preparation of Exhibit Y, Mr. Dillon, did your counsel advise you which models of instrument should be included in that schedule? A. Yes, sir.

Q. And the only instruments included in that schedule are those instruments which your counsel advised you to include in that schedule; is that correct? A. Yes, sir. \* \* \* \* \* [598]

### GARDNER P. WILSON

called as a witness by and on behalf of the defendants, having been first duly sworn, was examined and testified as follows:

The Clerk: What is your name, please?

The Witness: My name is Gardner P. Wilson.

### Direct Examination

Q. By Mr. Pruitt: Where do you reside, Mr. Wilson?

A. I live at 1435 Old House Road, Pasadena, California.

Q. What was your education, please?

A. I graduated from the California Institute of Technology in 1938 with a Bachelor of Science degree in engineering.

Q. Any specialized field of engineering?

(Testimony of Gardner P. Wilson.)

A. Yes, electrical engineering.

Q. By whom were you employed after you received your degree from Cal Tech?

A. My first employer was the Mott-Smith Geophysical Corporation of Houston, Texas, and my position was that of a computer. I went to Egypt for this company to work for the Socony Vacuum Oil Company in oil exploration work, and was [611] made a party chief while I was in Egypt.

Q. During what period of time were you so employed?

A. This was from 1938 to 1940; approximately two years exactly.

Q. What was the nature of your duties in that position?

A. I was party chief of a double gravity meter oil exploration crew during most of that interval.

Q. Did you have occasion to use and did you use precision instruments, including electronic instruments, during that period?      A. Yes, sir.

Q. What was your next employment?

A. My next employment was with the Lockheed Aircraft Corporation, where I was employed as a junior engineer, and I worked on the electrical design of the P-38 aircraft.

Q. During what period of time were you so employed?

A. This was 1940 to 1941; approximately one year.

Q. And what was your next employment?



(Testimony of Gardner P. Wilson.)

A. My next employment was with the Western Electric Company in New York. [612]

Q. During what period of time?

A. 1941 through 1945. Four years in total.

Q. What was your position at that company?

A. My final position was head of the field testing division of the field engineering force of the Western Electric Company.

Q. What was the nature of your duties in that work?

A. I was in charge of a group of engineers who were engaged in the first military tests and trials of radar, sonar, and magnetic detection equipment.

Q. Did you use any potentiometers in that work?

A. Yes, we used many potentiometers.

Q. What was your next employment?

A. My next employment was with the Naval Ordnance Test Station in Pasadena, U.S. Naval Ordnance Test Station. There was a slight period of about one month where it was actually run by Cal Tech. I was employed by Cal Tech for one month, and then it became officially part of Navy, but it was the same group of people.

Q. What was your position with the Naval Ordnance Test Station, Pasadena?

A. I started out as group head of a small group of engineers, which I held for a year or two, and progressively up to the head of the test division, which included all instrumentation development and testing. [613]

Q. During what period of time were you em-

(Testimony of Gardner P. Wilson.)

employed at the Naval Ordnance Test Station, Pasadena?

A. From 1945 to 1952, a period of six years.

Q. Did you use potentiometers in the work done by you at the Naval Ordnance Test Station, Pasadena?

A. Yes, sir.

Q. For what purpose or purposes were potentiometers used at that organization?

A. Well, potentiometers are used for a number of things. One of them is to divide a voltage to take a ratio of a voltage. The name of "potentiometer" implies just this function, and this is used in many instruments in many places. Other places include transducers, where a motion is translated into a change of resistance or a change in voltage, as measured across the potentiometer, as a function of that motion.

Q. Did you do telemetering work at Naval Ordnance Test Station, Pasadena?

A. Yes, we did telemetering work on many occasions.

Q. In connection with what device or apparatus did you use telemetering equipment?

A. We telemetered from guided missiles, and telemetered from torpedoes while in flight from the aircraft that was dropping them.

Q. By whom are you now employed, Mr. Wilson?

A. I am now employed by the Consolidated Engineering [614] Corporation in Pasadena, California.

(Testimony of Gardner P. Wilson.)

Q. What is your position with that organization?

A. I am their chief development engineer.

Q. And what is the nature of your duties in that capacity?

A. I am in charge of all development projects in the engineering division at Consolidated Engineering.

Q. Do you have any other engineers under your supervision in that capacity? A. Yes, sir.

Q. How many?

A. Approximately 25 development engineers.

Q. While you were at NOTS, Pasadena, did you or others in that organization do winding of coils and resistors? A. Yes, sir.

Q. Did you make any potentiometers while you were at NOTS, Pasadena? A. Yes, sir.

Q. Did you do so as early as 1946?

Mr. Lewis E. Lyon: That is objected to, your Honor, on the ground that it is without the pleadings of this case. There is no pleading in this matter of any prior inventor or prior use.

Mr. Pruitt: It is a preliminary question leading to a description by this witness of the project as testified to [615] by Mr. Bourns.

The Court: Overruled.

Mr. Pruitt: Will you read the question, please?

(The question referred to was read by the reporter as follows: "Q. Did you do so as early as 1946?")

The Witness: Yes, sir.

(Testimony of Gardner P. Wilson.)

Mr. Lewis E. Lyon: I object to that also on the ground, your Honor, that it is leading.

The Court: Overruled. He is an expert, and he may answer it. The answer doesn't rise above the reasons that he gives for it. Go ahead. [616]

Q. By Mr. Pruitt: Have you ever made a potentiometer, Mr. Wilson? A. Yes, sir.

Q. Did you make one during the time you were employed at NOTS, at Pasadena?

A. Yes, sir.

Mr. Lewis E. Lyon: I object, your Honor, and I move to strike the answer on the ground it is an endeavor to put in something without the pleadings which requires notice.

The Court: I am admitting it for the same limited purpose for which I allowed similar questions of another witness; I think Mr. Dillon, or one of the other witnesses. I forget who. Go ahead.

Q. By Mr. Pruitt: What size or sizes of wire did you use for that purpose, Mr. Wilson?

A. I think the finest wire that I have used personally is two-thousandths in diameter. This is a standard wire size.

Q. Have you ever used enameled wire for that purpose? A. Yes, sir.

Q. When using enameled wire for that purpose, is it necessary to remove the enamel from a portion of the wire before incorporating it into a potentiometer?

A. In order to make contact upon the sliding



(Testimony of Gardner P. Wilson.)

member, you must go through the insulating surface of the enamel that is on the wire. [617]

Q. And have you ever done that?

A. Yes, sir.

Q. In what manner did you accomplish that?

A. By various abrasive techniques, in which the enamel is removed either by a crocus cloth, sulphuric oxide, rouge, tripoli, corundum, file, anything to abrade the surface and take the enamel from the surface and expose the pure wire.

Q. Did you do that prior to 1950?

A. Yes, sir.

Q. While you were employed at NOTS, Pasadena, was Marlan E. Bourns also employed there during any portion of the period?

A. Yes, sir.

Q. During what period?

A. From the period that I started at the Naval Ordnance Test Station, which was in October, 1945, until Mr. Bourns resigned, approximately a year later.

Q. What was Mr. Bourns' position at NOTS during that period?

A. Mr. Bourns was employed as a junior physicist, grade P-3.

Q. Were the respective duties of yourself and Mr. Bourns in any way related during that time?

A. Yes, sir.

Q. What was the relationship? [618]

A. I was his supervisor.

Q. Did you have a group of persons under your



(Testimony of Gardner P. Wilson.)

supervision or control or direction during that period of time at NOTS?      A. Yes.

Q. What were the functions of the group that you headed in that organization?

A. The functions of this group were to develop instrumentation systems and equipment for the purpose of telemetering data from guided missiles, and like devices.

Q. Were potentiometers used in the requirements of those functions at that time?

A. Yes, sir.

Q. In what way or ways were they used at that time?

A. Their use was to translate a motion into an electrical signal which could be recognized and measured on the ground or by the receiving station to indicate the motion of the part in question.

Q. What types of potentiometers were being used at that time for those purposes?

A. We were using the standard available rotary type potentiometers, as manufactured by General Radio, Fairchild Instruments, G. M. Giannini Corporation in Pasadena, and Beckman Helipots, I believe.

Q. What particular manufacturer or manufacturers of [619] potentiometers that were used for telemetering purposes were used in connection with missiles at that time?

The manufacturers included Giannini of Pasadena, Fairchild, General Radio. As I recall, we used quite a few Giannini pots.

(Testimony of Gardner P. Wilson.)

Q. What type of Giannini pot was used in that way?

A. One of the types that was used was their Microtorque potentiometer, which is a very tiny device made of very fine wire, which is capable of being driven by a very delicate type of phenomena.

Q. Can you tell us, of your own knowledge, what the performance characteristics of that potentiometer were at that time?

A. Yes. This was a wire-wound potentiometer of very low torque. In other words, the friction drag to cause the wiper to move was very small. It was a very useful device.

Q. Do you know, of your own knowledge, the characteristics with respect to resolutions?

A. Yes. I believe we used the 2,000 ohm type, 2,000 to 5,000 ohm type, and the resistor card was wound with probably a thousand turns or more. The resolution there would be one part in 1,000 divided on a 360-degree arc.

Q. What were the characteristics of those potentiometers with respect to linearity at that time?

A. The linearity could be specified as purchased from [620] the manufacturer. As I recall, the standard model was a half a per cent, and it could be obtained in a tenth per cent size.

Q. What were the characteristics of those potentiometers with respect to repeatability?

A. The repeatability under constant temperature was probably good to a tenth of a per cent.

Q. Do you know, of your own knowledge, the

(Testimony of Gardner P. Wilson.)

diameter of the wire that was used in the Giannini pots that were being used by NOTS at that time?

A. It seemed to be two-thousandths or less.

Q. Did you have any discussion with the other persons in your group relative to using some other type of potentiometers than you were using at that time?

A. Yes, we had discussions on many occasions, in that this was one of our most useful types of transducer, and we had often wished for a linear device of convenient size and of convenient resistance value to match our telemetering unit. [621]

Q. Had you previously heard of a linear motion potentiometer at that time?

Mr. Lewis E. Lyon: That is objected to as calling for hearsay evidence, your Honor.

The Court: Overruled. He may answer.

The Witness: Yes, sir. I have used linear motion potentiometers for at least 25 years.

Q. By Mr. Pruitt: What types of linear motion potentiometer were available at that time?

A. While at NOTS?

Q. Yes, in 1946.

A. As I recall, there were large types as manufactured by CENCO, James Biddel, and others of the variety used in a physics laboratory that many people have seen of the hundred watt type. Practically all physics and engineering students are exposed to the use of these devices. They are called slide wires, very often.

(Testimony of Gardner P. Wilson.)

Q. Did you know of linear motion potentiometers in 1946 that were of small size?

A. Yes, sir, I recall many years ago using an adjustable grid leak manufactured by the Pilot Radio Company, now defunct, which was smaller than the diameter of a pencil, and perhaps two inches long. It was glass, a glass cartridge, and it was to vary the grid leak of the old-fashioned radio receivers. [622]

I also recall seeing, as parts of portable radios, and on hearing aids, very small linear potentiometers.

Q. Do you know of your own knowledge, Mr. Wilson, the various companies that are engaged in one or another aspect of the United States Government guided missile program?

A. I think this is general knowledge among the engineering profession.

Mr. Lewis E. Lyon: I move to strike the answer, your Honor.

The Court: I will strike the answer, not because it is not responsive, but it is immaterial. He is asking you specifically if you knew the companies.

The Witness: Yes, sir. All the air frame manufacturers, Lockheed, Boeing, Convair, Douglas, Fairchild, Vultee, Republic, Bell, Martin, all the air frame manufacturers.

The Court: Did you mention Boeing?

The Witness: Yes, I mentioned Boeing, and also mentioned the East Coast companies, Martin, Bell.

The Court: I am sorry. I didn't hear Boeing.



(Testimony of Gardner P. Wilson.)

Q. By Mr. Pruitt: Was that information available to persons in the general public?

Mr. Lewis E. Lyon: I object to that, your Honor, as calling for a conclusion of the witness.

The Court: I will sustain the objection. That is a conclusion to be drawn by the court. [623]

Other than airplane companies, what companies might be in the field at all to purchase potentiometers?

The Witness: Any company that is anxious to measure something. This might be an oil refinery; this might be a steel company who wants to know the position of their rollers; this might be a tank farm in which they want to know how much fluid is in the tank; this might even be a milk company.

The Court: Tell me, I am interested, what could a milk company find out?

The Witness: See how much milk they have got in the tank.

The Court: I see.

The Witness: By attaching a float and then coupling it to a potentiometer. In fact, the gas gauge of your automobile does exactly this same thing.

The Court: All right.

Q. By Mr. Pruitt: During the period 1946 to 1950, Mr. Wilson, were you familiar with the materials that were commonly used by potentiometer manufacturers for the various components included in their products? A. Yes, sir.

Mr. Lewis E. Lyon: I suppose, your Honor, that to this matter of——



(Testimony of Gardner P. Wilson.)

The Court: I made a mistake awhile ago. I said I allowed these questions to be asked of Mr. Dillon. These were allowed of Mr. Bourns. Wasn't that the name of the other [624] witness who testified along this line?

Mr. Pruitt: Mr. Simonick testified——

The Court: Yes, Simonick. Strike out Bourns. He was the scientist.

Mr. Lewis E. Lyon: This testimony is received subject to my objection that it is without the pleadings of the case?

The Court: That is right. The object, merely, is to counteract the statements of the plaintiff that a certain problem existed in the industry, and it was solved in a certain way.

Of course, if you read the opinion I wrote for the Court of Appeals in the Six Wheel case, Pointer against Six Wheel, you will find that courts pay very little attention to persons who, after a thing has been discovered, come in and say, "Why, there is nothing to it, anybody could have done that years ago." The fact remains that they didn't do it.

Mr. Pruitt: I understand that, your Honor.

The Court: That is our answer.

Mr. Pruitt: The principal purpose——

The Court: And that case is the law of the Circuit, because it isn't just my opinion, but it is the opinion of the court that I wrote on an appeal from a judgment in Oregon, where a man had invented a fifth wheel, and they pooh-poohed the idea, that there was nothing to it, anybody could have done it.

(Testimony of Gardner P. Wilson.)

But the fact remains that he was the [625] only one who succeeded. So I wrote the opinion for the court, and I told them it is very easy to have what the French call *esprit d'escalier*, and that is the wit of the stairway. That is, as you are leaving the house, you know, by the stairway, you think of the smart witty things you could have said. The French call it *esprit d'escalier*, stairway wit.

However, as I say, I am not passing judgment on this; I am merely telling you that testimony of this character is, at best, negative. However, it is admissible for whatever weight I will give it.

Mr. Pruitt: This has a dual purpose. It is to define the scope of the problem as distinguished from what Mr. Bourns explained; and, further, to show that the trade secrets claimed by Mr. Bourns were well known to others.

The Court: I want to say this. I am saying it at the present time. I am not very much impressed by the strength of the proof on trade secrets, as you probably have gathered, and I can say that when all of the plaintiff's evidence is in and they are not going to bring in new things in rebuttal. They won't be permitted to. I am not very much impressed that this is a case where trade secrets have been violated. Ultimately anybody in the field would know the customers. And I am not going to take the laundry route cases, which are unique to the State of California and change them into a new ground for unfair competition, much as I believe in the concept of unfair practices, as I call it, rather—much as

(Testimony of Gardner P. Wilson.)

I believe that it is a good judicial concept, that it helps out many a time when the justice of the case cannot be achieved otherwise.

In fact, I gave a short talk on it in New York, where a friend of mine had attacked the concept, so far as it applied to copyright, by claiming that courts are not to resort to this nebulous thing, but rather be consistent and sustain certain things in other ways. And I told him the difficulty with him is that he never has been a judge, and if he, like myself, had been a judge and had seen many instances where you can't do justice in other ways except by resorting to this, as I illustrated by the Looz case, he would find out that it is a very helpful thing for a court of equity.

However, as I say, the record is not very impressive at the present time. There is always a good deal of feeling where an employee goes out and starts to manufacture a product of his employer, and competes with him in the field, there is always a good deal of feeling.

Yesterday, when we were talking informally in chambers I referred to Kammerer against McCullough, a similar case, where a man absolutely untrained in the field, he wasn't even a machinist, he was a carpenter, went out and started to produce a product, which I held was infringement of a patent.

However, let us go on. [627]

Before the witness goes on, I will give you the citation for the opinion. *Pointer vs. Six Wheel Corporation*, 177 Fed. 2d 153.

(Testimony of Gardner P. Wilson.)

Mr. Pruitt: Will you mark this, please?

The Clerk: Defendants' Exhibit AB, marked for identification only.

The Court: All right.

(The exhibit referred to was marked Defendants' Exhibit AB, in evidence.)

[See Book of Exhibits.]

Q. By Mr. Pruitt: Mr. Wilson, I show you a copy of H. W. Rubinstein patent No. 2,242,327, issued May 20, 1941, and particularly to figures 11 through 16 thereof, and ask you if you are familiar with that patent?

Mr. Lewis E. Lyon. That is objected to, your Honor, on the ground that the witness has been in no way qualified in the field of patents.

Mr. Pruitt: Your Honor, he is not offered as a patent expert, but a mechanical engineer who can testify to the manner in which the device functions, which is illustrated in the patent.

The Court: All right. Is that the same as R-1?

Mr. Pruitt: Yes, your Honor. The last three digits are 327.

The Court: What are you talking about? [628]

Mr. Pruitt: Referring specifically to page 2, figures 11 through 16. It is on the second page of that patent.

The Court: What page?

Mr. Pruitt: Figures 11 through 16.

Q. By Mr. Pruitt: Do you understand the construction of the device illustrated in those figures, Mr. Wilson? A. Yes, sir. [629]



(Testimony of Gardner P. Wilson.)

Q. By Mr. Pruitt: What kind of a device is it?

A. This is a linear motion potentiometer.

Q. I show you Defendants' Exhibit AB, for identification, and ask you if that accurately depicts the potentiometer shown in the figures in the Rubinstein patent.

Mr. Lewis E. Lyon: That is objected to on the ground the witness has not been qualified to answer the question.

The Court: Furthermore, I don't know whether this has been reduced to practice. If so, then an actual device should be brought in.

Furthermore, you do not infringe the illustrations. You infringe the claims. And, furthermore, Rubinstein does as everyone else does, he says that this illustration is only one of his methods of embodying the invention, so I do not see how somebody can tell anything from a figure. If he has studied the entire patent and can tell from the teachings of the patent what is embodied in these, then that might be a good preliminary question, but, ultimately, a disclosure, prior disclosure, especially when the identical patent was before the Patent Office and is cited cannot destroy a patent. You cannot destroy a presumably valid patent by having somebody get up and take a figure of a patent, and without any relation to what the patent teaches, start to describe it in a manner so as to show that it would read upon the claims in suit. [630]

Mr. Pruitt: Your Honor, the purpose for which I was asking these preliminary questions was to



(Testimony of Gardner P. Wilson.)

ask this witness, who is an experienced engineer, whether or not the illustrations shown in the Rubinstein patent are structures which anticipate the structures that Mr. Bourns has.

The Court: You cannot ask that question, because that would decide the law suit. An expert cannot determine that.

Mr. Pruitt: I did not intend to ask him that question.

The Court: No. I like experts, but not to that extent. I never allow an expert to answer that question. Furthermore, the law of the Ninth Circuit is that even if 1500 experts say that a certain structure reads upon a claim, or doesn't read upon a claim, that does not decide it. The court can brush them all aside and still decide whether there was infringement or a lack of infringement on the basis of that.

Mr. Pruitt: Your Honor, I didn't intend to ask the witness the conclusionary question.

The Court: No, I am not going to allow a model to be constructed.

If this is only a paper patent and has not been reduced, then he can interpret it for us and say what it shows, but it is not his function to say whether it is anticipatory or not. That question cannot be asked in this Circuit, or in any other circuit.

For instance, on the question of doctors, we start with [631] the *Lumbra* case (290 U.S. 551), and a doctor may be asked whether in his opinion a man

(Testimony of Gardner P. Wilson.)

would be harmed if he worked, and from that the court may infer whether a man is totally or permanently disabled, but you cannot put a doctor on the stand, even if he examined the man, and ask him the direct question, because that is what the court has to determine. And our courts of appeals, beginning with the case of *Stephens vs. U. S.* (73 F.2d, 695) draw those lines, and in patent litigation that line has been drawn a long time ago.

You can ask him if a certain structure reads upon a claim if he is a patent expert. I don't know whether this man has ever seen a patent.

Mr. Pruitt: I am not putting him on for that.

The Court: Or whether he can interpret claims. I have great admiration for Cal Tech, but, after all, you know they do not all turn out to be patent experts. Some of them have come in as expertees. Dr.—what is his name, who testifies so often? Dr. Mac-somebody?

Mr. Lewis E. Lyon: Dr. McKeown, now deceased.

The Court: Dr. McKeown. Furthermore, I held a patent infringed on a brick, an insulating brick, against the opinion of the greatest authority on insulation in the United States, Professor Knudson. He wrote a book on insulation and notwithstanding the fact that he gave his opinion—he didn't give the opinion that the patent was infringing, but he merely [632] stated that in his opinion there was nothing new about this particular device, it was known in the art before—nevertheless, I held that

(Testimony of Gardner P. Wilson.)

it was new, and it was infringed, and what is more, the court of appeals sustained me on it.

Mr. Pruitt: Your Honor, I am afraid I haven't expressed myself clearly. What I intend to prove by this witness is that the structure shown in the illustration in the Rubinstein patent could have been used for the same purpose for which the Bourns instrument was used, and it seems to me that this witness is qualified to state that if an instrument were constructed in accordance with the illustration, it would perform the same function as the Bourns instrument.

The Court: That does not destroy patentability.

Mr. Pruitt: I think it is material, your Honor, to the nature of the problem that faced Mr. Bourns in 1946.

The Court: No, that does not do it. You can achieve the result by different means.

There is already evidence in the record that they used a different means. There is already evidence from one of your own witnesses that the embodiment was more economical, and that, in itself, would be a patentable combination.

Remember, I do not take any stock in that statement of Mr. Justice Douglas that there has to be the spark of genius.

Mr. Pruitt: I understand that.

The Court: I don't believe that is a good criterion, [633] and I don't think the court as it is presently constituted would follow it. I think simple things may be the subject of invention. That is why

(Testimony of Gardner P. Wilson.)

I sustained the zipper patent in the Hookless Fastener case. It is a simple patent. As a matter of fact, the man struck on an invention by doing a sloppy job rather than good work. He found that by interlocking things in a sloppy manner he could achieve a certain result. Before that it was a rigid thing, and could not be used in such things as women's skirts, purses, and men's trousers, and he brought about that flexibility.

Mr. Pruitt: Your Honor, what I intended to do through this witness was not only to show that the same result would be achieved, but that substantially the same means are applied as in that illustration.

The Court: No, you cannot do it that way. I want to say that I have great admiration for these scientists, especially young scientists. I happen to be one of the parents of a very brilliant young scientist in the atomic field. He got his Ph.D in Berkeley before he was twenty-two, is now teaching at Berkeley, and is a professor of the University of Illinois. So I have great admiration for these scientists, but I want them to stay within their field.

Perhaps this man has read this thing. But how do I know he understands the teaching of this patent? A man may be very brilliant and not be able to read a set of lawyers' claims. [634]

Mr. Pruitt: Very well, your Honor.

The Court: He can describe what, in his opinion, that figure represents, and what elements he sees



(Testimony of Gardner P. Wilson.)

there. He can describe that as an electrical engineer.

Mr. Pruitt: I believe that is the pending question, your Honor, whether he understood the structure illustrated in that drawing.

The Court: No. I thought you were showing him something and asking whether that was constructed according to the teachings of this patent.

Mr. Pruitt: I beg your pardon. I think your Honor is correct, but I asked him to compare this illustration, Defendants' Exhibit AB, for identification, with the illustration in the Rubinstein patent, and I asked him if it was a correct depiction of the structure shown in the Rubinstein patent.

The Court: I have no objection to that. I have no objection to his answering that question.

The Witness: Yes, sir, it is.

The Court: All right.

Q. By Mr. Pruitt: Will you describe the structure that is illustrated in the Rubinstein patent shown you?

Mr. Lewis E. Lyon: What was that question?

(The question was read.)

Mr. Lewis E. Lyon: That is objected to on the ground he [635] has not been qualified to answer the question.

The Court: I do not think that his description would go. We have to take the description given by the inventor as illustrative of his device.

Mr. Pruitt: Your Honor, my understanding was that the illustrations of the patent are supposed to be understandable by a person skilled in the art,



(Testimony of Gardner P. Wilson.)

from the illustration itself. If that is true, I think this witness is competent to testify.

The Court: Suppose I interpret them in a different manner than the man has described them? You see, as a matter of fact, the scope of illustrations in patent litigation is very limited, and you cannot use them to enlarge the scope of the patent. Sometimes you may use them to narrow the claim, but, ultimately, it is the claims that are infringed, not the figures represented by the claims.

Mr. Pruitt: I understand.

The Court: If that were true, then a man might describe an illustration, and illustrate it, and then his claims would be useless.

Mr. Pruitt: My understanding, your Honor, was that on the prior art if the illustration in a prior art is broader than the claims of that patent, it is anticipatory of a subsequently issued patent, even though the subsequently issued patent does not infringe the claims of the prior patent.

The Court: Well, an invention is anticipatory. An [636] invention is anticipatory, not an illustration of the invention. And what the invention is, is measured by the claims allowed. You would raise the illustration to a position which it does not occupy in the law of patents. Now, sometimes your file wrapper history would show.

For instance, I talked about the Joyce case, the Joyce patent. Let me get that opinion. That is Joyce vs. Solnit, 29 F. Supp. 787. In that case Mr. Joyce received a patent, a very limited patent, for

(Testimony of Gardner P. Wilson.)

an enclosed inner sole of a shoe, a platform shoe, and the file wrapper showed that that is all he was allowed, that all his claims to other platform shoes were disallowed. Solnit came out and produced a platform shoe which broke the inner sole and put in round parts as a means of heightening the shoe, and then Joyce claimed he violated the patent. I held that he did not. That is what broke the exclusive market for Joyce in platform shoes, and that is the decision in the Solnit case. If you look it over, you will find that following that decision all sorts of platform shoes appeared. Joyce still has a very fine shoe, but he does not claim the exclusive right to all platform shoes. It is only shoes which have an inner sole encased in a certain manner.

Mr. Pruitt: Yes, your Honor. We expect to rely upon a similar argument in this case.

The Court: That is all right. I will let you argue the [637] matter, but I don't want the experts to do the arguing. If the experts wants to describe things, all right.

Now, I don't think there is any question pending. Is there?

(The question referred to was read as follows: "Will you describe the structure that is illustrated in the Rubinstein patent shown you?")

The Court: All right. I will allow it to go in. Of course, I will pay no attention to his answer, I will say that right now. But if it gives you the satisfaction of having it in the record, all right.

(Testimony of Gardner P. Wilson.)

You see, I am very jealous of the judicial prerogative, having been a judge for twenty-six years. I love experts. As a matter of fact, I have sold the bar and the bench in the East on the idea of court-appointed experts, as we have in California. I am very, very strongly in favor of experts.

As a matter of fact, I went back to an article I wrote, or a lecture I gave before the American Bar Association on the Prettyman report, a report of a committee of which I am a member, and I went back and discovered the first use of experts in the English-speaking world, in 1500-something, where the court said, "If we need any assistance in the art, we will have it." That is the first actual reference by a court to the use of an expert, other than the Latinists [638] they used to employ when pleadings were in Latin, and some of the judges not being very good Latin students, employed Latinists to interpret the pleadings for them.

Now, if he wants to describe it, that is all right, but I will go by the description the inventor gave, which is what the Patent Office must have done, because this was one of the references which they cite.

Mr. Pruitt: Your Honor, I think in view of your remarks I might save a little time if I could make a brief offer of proof at this time.

The Court: No, I don't want an offer of proof. They are not allowed in my court. Your question should be sufficient.

I have told you he may answer the question. I have told you also that I shall exercise my right of

(Testimony of Gardner P. Wilson.)

disregarding his description if it departs from the description given by the inventor in this patent, which I have a right to do. But you can put it in. And if we had a jury here, I would instruct them in the same manner, that they have the right to disregard it.

Mr. Pruitt: Your Honor, if I may explain my problem, that is a preliminary question.

The Court: Too many of these are preliminary. Go ahead and put it in. You see, I have a right to say I do not want any experts. You know that, don't you? [639]

Mr. Pruitt: Yes, your Honor, I do.

The Court: I merely say that if he gives a description which is different from that given by the inventor that I will disregard it.

Mr. Pruitt: Very well, your Honor. I will proceed to another subject.

Q. By Mr. Pruitt: Mr. Wilson, have you ever been required to test the performance characteristics of potentiometers? A. Yes, sir.

Q. Did you have occasion to do that while you were at NOTS at Pasadena? A. Yes, sir.

Q. Prior to the year 1950? A. Yes, sir.

Q. What characteristics did you customarily test in potentiometers during that period?

A. The customary tests were linearity, repeatability, temperature coefficient as a function—resistance as a function of temperature, noise, and, of course, resistance value as a function of motion. That is a part of the linearity test.



(Testimony of Gardner P. Wilson.)

Q. What test equipment did you use at NOTS to determine linearity?

A. Linearity is an expression or a plot of position [640] versus the electrical behavior. This requires a mechanical measuring device to detect the motion, which includes an angle—in the case of a rotary potentiometer it is an angle measuring device, and electrically it requires a Wheatstone bridge.

Q. And is that the device you used at NOTS to make that test?      A. Yes, sir.

Q. What test equipment did you use during that period to determine the total resistance of a potentiometer?

A. The total resistance was usually measured with an ohm meter or with a Wheatstone bridge for high accuracy.

Q. Did you make the bridge yourself, or purchase it commercially, or how did you acquire that?

A. We purchased the bridge from General Radio Corporation in Massachusetts.

Q. After Mr. Bourns left NOTS in Pasadena in November, 1947, did you have any further dealings with Mr. Bourns?

A. Yes, several—— [641]

\* \* \* \* \*

The Court: I want to call attention to something here. I have been looking for it in the patent, and I have got it now. This is to show how unfair it is to seek to have someone interpret a drawing in a



(Testimony of Gardner P. Wilson.)

different manner from the manner in which the inventor in the patent, as allowed, described it.

I am reading from Rubinstein, the Rubinstein patent, granted on May 20, 1941, after it had been pending for over three years. The application was dated April 13, 1938. After he gives the two descriptions, he says:

“While I have shown and described two constructions in which the invention may be advantageously embodied, it is to be understood that the constructions shown have been selected merely for the purpose of illustration or example and that various changes in the size, shape, and arrangement of the parts may be made without departing from the spirit of the invention or the scope of the subjoined claims.”

And that is contained in every patent, even Bourns, in the patent in suit. It has the same or similar language. It gives two embodiments of the invention.

All right. Go ahead. [642]

\* \* \* \* \*

### Cross Examination

Q. By Mr. Lewis E. Lyon: Mr. Wilson, when you went to work for the Naval Ordnance Training Station——

A. Test Station.

The Court: Testing Station. He corrected you.

Q. ——Testing Station, Mr. Bourns was already working there, was he not?

A. Yes, sir.

Q. And he had been working there for some time?

A. Yes, sir.

(Testimony of Gardner P. Wilson.)

Q. Before you went to work there did you have any knowledge as to what Mr. Bourns was doing?

A. He told me what he was doing when I got there.

Q. I see. Now, isn't what Mr. Bourns did at the [646] Naval Ordnance Testing Station primarily concerned with pulse position modulation transmitter and receiver?

A. And the end organs to drive it, yes.

Q. And wasn't there as a matter of fact a patent granted to Mr. Bourns on that development?

A. Yes, sir.

Q. And that patent pretty well shows what Mr. Bourns did, does it not?            A. In part, yes.

Q. Now isn't it true also that Mr. Bourns—when did Mr. Bourns leave the testing station?

A. I don't recall the exact date. I think we would have to look at the record to find out. It was about a year after, I will say, it was in the fall of 1946.

Q. The fall of 1946?            A. I believe so.

Q. How long before you had come there?

A. A year.

Q. I mean how long before that had you been there?            A. A year.

Q. That is, you came in the fall of 1945?

A. Yes, sir.

Q. Now isn't it a fact, Mr. Wilson, that during the time when Mr. Bourns—of Mr. Bourns' employment that you had a micro-torque potentiometer made by the Giannini Company [647] which you

(Testimony of Gardner P. Wilson.)

kept in your desk and brought out on various occasions and ridiculed and asked "How could anybody get \$50 for this junk?" A. No, sir.

Q. You never did that at any time?

A. I don't recall that.

Q. You don't recall having a micro-torque—a Giannini micro-torque?

A. I remember having the micro-torque potentiometer in my drawer.

Q. In your drawer?

A. Yes. And I had many others in the stock room. I remember examining it and was unhappy with many of the features it had and thought we could do better.

The Court: He admits he was unhappy about it.

The Witness: I was unhappy, sir. I don't believe I expressed it in that language.

Q. By Mr. Lewis E. Lyon: You wouldn't deny, however, that you said that—"How could anybody get \$50 for anything like this"?

The Witness: I may have, sir.

Mr. Lewis E. Lyon: That is all.

The Court: All right, any further questions?

Mr. Pruitt: No further questions.

The Court: Mr. Wilson, I want to say something to you. [648] I don't think you have ever been in this court before and I want you to know that nothing that I have said in my discussion with counsel in any way reflects upon you or your competency.

The Witness: I understand that.

The Court: When we are talking about experts

(Testimony of Gardner P. Wilson.)

we are talking about experts in general and not you in particular and the limited function they have in the Federal Courts, so I just trust you will not take anything that I have said as personal because I don't even know you. I have never seen you.

I have a great admiration for the institution from which you are a graduate and the competence of the men who have graduated from that school. They have come before me in various capacities. You know a lay person will come in to the middle of an argument and think that there is some reflection being cast on him, but that is not so.

Have you ever testified in a court before?

The Witness: Only for myself on a parking ticket.

The Court: Then you have had a new experience.

The Witness: I would like to add that the same Dr. McKeown that I spoke of is my teacher and friend so I know from his tales of experiences in the courts that this sort of thing is to be expected and my feelings are not hurt in the least and I thank you for your courtesy.

The Court: All right. [649]

Mr. Pruitt: Call Mr. Pitzer.

### EDMUND W. PITZER

called as a witness by the defendants, having been previously sworn, was examined and testified as follows:

#### Direct Examination

Q. By Mr. Pruitt: Mr. Pitzer, you are em-

(Testimony of Edmund W. Pitzer.)

ployed at the D. B. Millikan Company and were in 1947 when Mr. Bourns came to that organization, were you not?       A. I was.

Q. And did you talk to Mr. Bourns on that occasion?

A. Along with Mr. Millikan and Mr. Gobel, yes.

Q. And what was the subject matter of that conversation?

A. Mr. Bourns had a model potentiometer that he showed us.

Q. I will show you Plaintiff's Exhibit 6 and ask you if the model that Mr. Bourns had on that occasion was that or a similar device?

A. I believe it is.

Q. And did Mr. Bourns at that time state the purpose of his visit to the D. B. Millikan Company?

A. I believe he stated that he wanted to have either some prototypes made—in fact I believe it was for prototypes. [650]

Q. Did you have a discussion about what types of prototypes should be made at that time?

A. Do you mean in regard—

Q. The construction.

A. To the construction? I don't believe that it was at that time.

Q. As a result of that meeting did the D. B. Millikan Company receive an order from Mr. Bourns for the production of any potentiometers?

A. Yes, I believe they did.

Q. And what was the order, do you recall?



(Testimony of Edmund W. Pitzer.)

A. Well, I recall one order for 40 units.

Q. Was there a previous order for prototypes?

A. I believe there was.

Q. And was there a discussion with Mr. Bourns at which you were present in which you discussed the constructional details of the prototypes to be built by the D. B. Millikan Company?

A. Yes; along with Mr. Gobel and Mr. Millikan.

Q. And were any changes in the model that Mr. Bourns had with him discussed at that time?

A. Yes. It was suggested by either Mr. Millikan, Mr. Gobel or myself the use of a square shaft.

Q. Were any other suggestions made?

A. And also changes were incorporated in the cover [651] to facilitate ease of manufacture.

Q. And I show you now Plaintiff's Exhibit 4-A and Exhibit 4 and ask you if those two instruments were built by the D. B. Millikan Company while you were employed by the D. B. Millikan Company?

A. I believe they were.

Q. And you testified that later 40 additional instruments were produced at the D. B. Millikan Company?

A. That is correct.

Q. And how did those instruments compare in structure with the prototypes that are before you?

A. They were considerably longer. The end plates were eliminated and they were—the covers were manufactured of bakelite versus the Lucite here.

Q. Now, who at the D. B. Millikan Company

(Testimony of Edmund W. Pitzer.)

supervised the production of the 40 potentiometers ordered by Mr. Bourns from that company?

A. I did.

Q. And who directed you to supervise that job?

A. Either Mr. Millikan or Mr. Gobel.

Q. And what was your position with the D. B. Millikan Company at that time?

A. I was production engineer.

Q. Mr. Bourns worked at the D. B. Millikan Company during the time that the D. B. Millikan Company was manufacturing [652] these 40 potentiometers?

A. Yes, he did. In fact he was on its pay roll.  
\* \* \* \* \* [653]

(The exhibit referred to was marked Defendants' Exhibit AC, and was received in evidence.) [666]

[See Book of Exhibits.]

\* \* \* \* \*

### MARLAN E. BOURNS

called as a witness by the plaintiff in rebuttal, having been previously sworn, resumed the stand and testified further as follows:

#### Direct Examination

Q. By Mr. Lewis E. Lyon: Mr. Bourns, you have heretofore testified concerning your employment by the Testing Station, Naval Ordnance Testing Station, and have testified as to the work that you did while so employed. It was testified to yesterday by Mr. Wilson that the work that you did

(Testimony of Marlan E. Bourns.)

was shown by a patent which had been issued to you. I place before you a patent No. 2,510,060, granted June 6, 1950 for pulse time modulation circuits and method, and I will ask you if that is Letters Patent that were granted to you as a result of the work that you did while at Naval Ordnance Testing Station?

Mr. Pruitt: To which we object, your Honor. I see no materiality in the granting of another patent to Mr. Bourns. I think it is new matter that was raised by Mr. Lyon, himself, in yesterday's testimony, and not by the defendants.

Furthermore, it seems to me absolutely immaterial to any [672] issue in this case.

Mr. Lewis E. Lyon: The only purpose of this offer is to show precisely what the witness did, which did not involve in any way the matter of potentiometers, your Honor.

The Court: All right. I don't want to start on new issues.

Mr. Lewis E. Lyon: This is not a new issue, your Honor.

The Court: All right.

The Witness: Yes, sir, that is the patent that was granted me.

Mr. Lewis E. Lyon: I will offer this patent in evidence as plaintiff's exhibit next in order.

Mr. Pruitt: What was the witness's answer?

(The answer was read by the reporter.)

The Court: All right. I think you asked the last witness, Mr. Wilson, that same question.

(Testimony of Marlan E. Bourns.)

Mr. Lewis E. Lyon: I asked him if the work that he did was culminated in a patent, and he said yes. Now, this is the patent that was issued.

The Court: All right. I don't want to go into it to see what it is all about.

Mr. Lewis E. Lyon: I don't want to go into it either.

The Court: All right. Let's all keep our promises.

The Clerk: Is this admitted, your Honor?

The Court: Yes, it may be received. [673]

The Clerk: Plaintiff's Exhibit 45 in evidence.

(The exhibit referred to was marked Plaintiff's Exhibit 45, and was received in evidence.)

Q. By Mr. Lewis E. Lyon: While you were employed at the Naval Ordnance Test Station, to your knowledge, were any potentiometers used by you or anyone else, or did you see any potentiometers?

A. The only ones I saw were conventional radio volume controls, and one Giannini Microtorque, which was referred to yesterday, at the NOTS plant. Then in the installation of the equipment, of the telemetering equipment, at Convair shortly before I left, I did have occasion to see some potentiometers used by Convair, as I already mentioned.

Q. Those were the ones you testified to, operated with a string?

A. Not the one with the string. I saw the one with the vane and the gear train arrangement.

Q. But there were no others?

A. No, sir.



(Testimony of Marlan E. Bourns.)

Q. You did not see any precision potentiometers there at all then?

A. No, sir, I didn't.

Q. And there were none used?

A. Not to the best of my knowledge.

Q. Now, this problem that culminated in this patent, Exhibit 45, did it entail the use of potentiometers?

A. Yes, in making experimental models of this instrument, we used radio volume controls to adjust some of the [675] resistances in the circuit. Then once we determined the resistance value that we wanted, we substituted fixed resistance for that value.

Q. Then you did not use in that problem, the ultimate carrying out of that problem, a variable potentiometer at all?

A. No, sir, I believe not, inasmuch as the entire eight-channel unit was in a cube, about two inches in all directions.

Q. Mr. Bourns, there has been some discussion here which may need clarification with respect to the use of this part number, as the same appears on Exhibit D, for example. That is the part number 8002925. Will you explain what significance that part number has, or how those part numbers are developed?

A. Well, many companies, particularly the large companies, who are engaged in missile work like to identify the various devices which they produce by some numbering system of their own, for the



(Testimony of Marlan E. Bourns.)

sake of convenience of their records and references, rather than referring to assorted names and numbers and designations which the various manufacturers may use, so it is common practice for these companies to request that we in some manner attach a number of that type.

Q. Does that part number, the purchaser's part number on such a part, have any significance whatsoever with the source, or origin, or design, or originality of the part on [676] which the number is placed?

Mr. Pruitt: I will object to that as a leading question.

The Court: The objection is sustained. I think we are going over the same ground here. After all, on the background of the invention, I think we ought to confine ourselves strictly to rebuttal.

Mr. Lewis E. Lyon: This is rebuttal, your Honor. It is with respect to this part number, and if your Honor understands that the part number has no significance other than identification, and that can be agreed upon, there is no need to go into it.

The Court: I am not deciding any facts in advance. I am just remembering the facts in the record relating to this matter. I don't think it is necessary in a law suit that every contention of the other side, no matter how insignificant, be met. What we are interested in is the patent, and some claim, and whether they have violated it, and whether there have been any unfair practices by the defendants arising out of it. That is the simple question here.

(Testimony of Marlan E. Bourns.)

The manner of marking a part is not a part of the invention. The invention is a substantive matter. It isn't just a matter of form, or it isn't a process, but it is a combination of various elements to produce a certain result.

Mr. Lewis E. Lyon: That is all, Mr. Bourns.

The Court: Just a moment. [677]

### Cross Examination

Q. By Mr. Pruitt: Mr. Bourns, you say you saw no precision potentiometers in 1946, is that correct?

A. In the course of my employment at NOTS, except as mentioned.

Q. And what exception was that?

A. The unit which I have described previously, and which I saw at Convair in the course of installing telemetering equipment in the Convair missile.

Q. What unit was that? What type of potentiometer was it that was a precision potentiometer?

A. It was a rotary potentiometer; I believe it was a Giannini micro-torque brand.

\* \* \* \* \*

Q. Isn't it a fact that the first production instrument of the Model 118 was not shipped by you to any customer prior to January 1952?

A. I didn't understand that. Was not shipped to us [678] by any customer, did you say?

Q. Was it shipped by you to any of your customers prior to January 1952?

(Testimony of Marlan E. Bourns.)

A. I am not certain of the first shipping date of the exact instrument that is shown there.

Q. Is it your testimony that you don't know whether or not the instrument was shipped prior to January 1952?

A. I would first need clarification as to the limitation you are putting on the terminology, "the instrument."

Q. The Model 118 instrument. Does that clarify the question?

A. Not necessarily, entirely, inasmuch as we have a Model 116, 117 and 118, which are basically similar, with the exception of one being a single output, one a dual output, and one a triple output; and it is further complicated by the fact that there were various developmental models which were basically the same as this, but varied in minor degrees and may or may not have been identified by those specific model numbers.

Q. All right, Mr. Bourns. When was the first Model 118 sold by Bourns Laboratories?

A. I can't tell you accurately that date at this time.

Q. Do you have records here which would indicate the date of the first sale of that device? [679]

A. We may have.

Mr. Pruitt: I might say at the time of the previous cross examination of this witness I asked the witness to consult his records with respect to this question.

Mr. Lewis E. Lyon: Apparently the first date

(Testimony of Marlan E. Bourns.)

that I have—I will hand the witness an invoice that has been handed me, and apparently it indicates the date of shipment of October or September of 1951 of an instrument shipped to Douglas under that part number, and designated a 118 modified, or 117 modified.

Is that correct?

The Witness: Yes, this appears to refer to a Model 118 modified. It mentions that it is similar to the envelope of Bourns Model 117 currently supplied to Douglas.

Mr. Lewis E. Lyon: Then that does not even indicate the first date of the supplying to Douglas of the 117, does it?

The Witness: No.

Mr. Pruitt: If I might clarify the record. The questions are about the Model 118, Mr. Lyon.

Mr. Lewis E. Lyon: But the witness says the 118 and 117 were the same except one was a dual and one a triple and one a single.

Mr. Pruitt: We will take one instrument at a time.

Q. By Mr. Pruitt: Do I understand you, Mr. Bourns, [680] to say that the purchase order which I hold in my hand indicates the date of the first shipment of the Model 118 to any customer of Bourns Laboratories?

A. I don't actually see a shipping date on it.

Q. In other words, the date the instrument bears is the date of the purchase order, is that correct?

A. Yes, that is one of the dates. It says the re-



(Testimony of Marlan E. Bourns.)

quired delivery was November 9, '51. I don't know whether we shipped it ahead of that or what.

Q. It was after the date of the purchase order which you hold in your hand, was it not?

A. I assume so, if this was the first purchase order, which it has been indicated to be.

Mr. Pruitt: I will offer this as Defendants' next in order.

The Court: It may be received.

The Clerk: Defendants' Exhibit AD in evidence.

(The exhibit referred to was marked Defendants' Exhibit AD, and was received in evidence.)

[See Book of Exhibits.]

Mr. Lewis E. Lyon: You wanted to know when it was first shipped. You have asked it. I am informed that the book records show that that instrument was shipped on invoice No. 7066, dated October 4, 1951 to Bendix.

Mr. Pruitt: And that is the Model 118?

Mr. Al Beck: It is called a 117 modified on the invoice. [681]

Q. By Mr. Pruitt: Mr. Bourns, you have heard the statements of Mr. Lyon and Mr. Beck that a 117 modified was shipped to Bendix on October 4, 1951; do you recall in what respects the Model 117 was modified?

A. The document you showed me indicated that it was a single, rather than a dual, and that is the distinction between the Model 117 and the 118.



(Testimony of Marlan E. Bourns.)

Q. Was that the first Model 117 that was delivered to any customer of Bourns Laboratories?

A. No, sir.

Q. On or about what date was the first Model 117 delivered to a customer?

A. We may have that information, too.

Mr. Lewis E. Lyon: I am informed that the date was September 21, 1951 on invoice No. 7042.

I will give you the information with respect to the 116 at the same time. It may shorten the matter up. That was first sold on invoice No. 7061 on October 1, 1951.

Mr. Pruitt: Thank you, Mr. Lyon.

Q. By Mr. Pruitt: Mr. Bourns, isn't it a fact that during the period of time that Mr. Pitzer was employed by you the Bourns Laboratories did not manufacture a Model 116, 117 or 118?

A. Yes, sir, that is correct. [682]

\* \* \* \* \*

EDWARD GOEPPINGER,

called by the plaintiff in rebuttal, being first sworn, was examined and testified as follows:

\* \* \* \* \*

Direct Examination

By Mr. Lewis E. Lyon:

Q. How are you employed, Mr. Goeppinger?

A. I am currently employed as salesmanager of Bourns Laboratories Instrument Sales Corporation.

Q. How long have you been employed by Bourns Laboratories? A. Since September '49.

Q. In what capacities? [683]

(Testimony of Edward Goeppinger.)

A. I originally was employed by Bourns Laboratories as design engineer, worked in that capacity for approximately one or two years, and there was a gradual transition to the sales function, contacting customers, making customer proposals, evaluating customer requirements, and that capacity, or I should say that duty has expanded to the capacity of salesmanager in the present organization.

Q. In that capacity do you have charge of the sales records?      A. Yes, sir.

Q. All sales records of the organization?

A. I have charge of all sales records, of the sales activities, and have available all accounting records that might have taken place prior to my joining the organization.

Q. During what year did Bourns Laboratories first sell linear motion potentiometers?

A. The linear motion potentiometers had been sold prior to my employment with Bourns Lab.

Q. Do the records show how many there were during the first year of sale?

A. According to the records of the first year of sales, it was somewhere around forty or fifty instruments, for a total gross sale of around two or three thousand dollars.

Q. What year was that sales year?

A. That was, I believe, in 1947.

Q. All right. Now, what were the gross sales in numbers and in dollars of linear motion potentiometers by Bourns Laboratories in the year 1953?

A. In 1953 the total sales ran close to \$300,000.

(Testimony of Edward Goeppinger.)

The individual instrument price had been substantially reduced. The average selling price was under forty—I should say under \$50, between forty and fifty, so that indicates that the [685] total quantity sold was in the neighborhood of six to eight thousand pieces.

Q. What was the number of employees of the Bourns organization in 1947, do you recall?

A. I was not with the organization at that time. I do not know specifically.

Q. The records do not show?

A. Well, I have heard what the gross of the organization was. I know it was just a handful.

Q. How many employees are in the regular employment of the Bourns Laboratories at the present time?      A. Approximately 120. [686]

\* \* \* \* \*

(The document heretofore marked Plaintiff's Exhibit 41, for identification, was received in evidence.) \* \* \* \* \*

[See Book of Exhibits.]

### Cross Examination

Q. You state that in 1947 Bourns Laboratories sold approximately forty to fifty linear motion potentiometers for a total dollar volume of two to three thousand dollars; is that correct?

A. As I best recall, that is correct. \* \* \* \* [687]

Q. In 1948 do you know what the sales of linear motion potentiometers by Bourns Laboratories

(Testimony of Edward Goeppinger.)

amounted to, either by number of instruments or by dollar volume?

A. Am I permitted an approximation on this?

The Court: Yes.

Mr. Pruitt: Yes, I just want your best recollection. [688]

The Court: And give it as accurately as you can.

The Witness: We do have records on it, but as I best recall it, it was in the neighborhood of around eight or ten thousand.

Q. By Mr. Pruitt: Dollars?

A. Correct.

Q. Do you know how that dollar volume compares to the sales, the dollar volume of sales of rotary potentiometers in that year?

A. I would say if there were any sales of rotary potentiometers in that year, it was only one or two prototype units that were submitted for evaluation. The prototype units were not considered units that were used in production.

Q. In 1948 did Mr. Bourns sell any potentiometers other than linear motion potentiometers?

A. From what I can observe from the past records, there were other sales of other types of instruments at that time.

Q. And what types of instruments were those?

A. I believe there were designs at that time on pressure units and other types of devices, such as the vane devices.

Q. Do you know how the sales of linear motion

(Testimony of Edward Goeppinger.)

potentiometers compares in that year to the type of all other devices that were sold by Mr. Bourns in that year?

A. I do not have exact figures available. I think they may be available in some of the other records.

Q. Do you know whether or not the sales of all other types of instruments were larger than the sales of linear motion potentiometers?

A. I don't think I could say accurately.

Q. In 1949 can you state whether or not it is true that the total sales dollar-wise of linear motion potentiometers by Mr. Bourns totaled about \$3,000?

A. In 1949?

Q. Yes.

A. You are asking if I did say that?

Q. No, if you know that that is true or not.

A. It sounds like it is reasonably correct. I think it may have been slightly higher than that.

Q. You mean within a thousand dollars or so?

A. I wouldn't pin it down to a thousand dollars.

Q. Now, is it a fact that in that same year, 1949, the sales of other types of instruments by Bourns Laboratories totaled approximately \$60,000?

A. In rough figures, yes.

Q. In 1950, is it a fact that the total sales of linear motion potentiometers by Bourns Laboratories totaled about \$18,000?

A. I would not say whether that is correct or not.

Q. Do you know if it is approximately correct?

A. I do not have exact figures on that, that I



(Testimony of Edward Goeppinger.)

can recall [690] by figures. I can chart the general trend of the general growth. Whether or not some of the large orders were delivered in one year or another is something that was more closely associated with the accounting function rather than the sales function.

Q. In 1950, is it a fact that the total sales by Bourns Laboratories of instruments other than linear motion potentiometers totaled about \$81,000?

A. I believe that is a fair estimate.

Q. Would it be fair to say that in 1949 and 1950 the sales of potentiometers other than linear motion potentiometers by Bourns Laboratories was substantially greater than the sales of linear motion potentiometers during that period?

A. In terms of dollar sales, I would say yes. In terms of potential future sales, I would say no.

Q. Now, at the time of the first sale of the Model 118, the first production model sold to a customer for use, what was the price of that instrument?

A. Are you referring to the modified unit that we sold to Bendix? [691]

\* \* \* \* \*

# HERBERT E. KIDDER

a witness called by the plaintiff, having been previously sworn, was recalled and testified in rebuttal as follows:

## Direct Examination

Q. By Mr. Lewis E. Lyon: Mr. Kidder, you are familiar, are you not, and have studied prior pat-

(Testimony of Herbert E. Kidder.)

ents which have been set up in the answer in this case?      A. Yes, I am.

Q. Including the patents to Rubinstein, Nelson, Batcheller, Schauer, Campbell, and the others which now formulate Exhibits R-1 to R-11, inclusive, copies of which I now place before you?

A. Yes, I am familiar with them.

Q. Do any of these patents show a potentiometer in [695] which there is found a lid carrying a resistance element and a shorting strip, and in the body of the potentiometer there is a spring contact element or elements mounted to slide in the body of the element upon a bar or shaft?

A. In my opinion there is not.

The Court: What claim are you reading?

Mr. Lewis E. Lyon: I didn't hear your Honor.

The Court: What claim were you giving him?

Mr. Lewis E. Lyon: The only claim of the '981 patent, your Honor.

The Court: That is the only one in suit?

Mr. Lewis E. Lyon: That is the only one in suit.

The Court: All right.

Q. By Mr. Lewis E. Lyon: You are familiar with the Bourns linear motion potentiometer, are you not?      A. Yes, I am.

Q. Do those Bourns linear motion potentiometers include a lid having a variable resistance element and a shorting strip mounted in the lid?

Mr. Pruitt: To which we object, your Honor, on the ground that this entire line of questioning is improper rebuttal. I don't believe there was any

(Testimony of Herbert E. Kidder.)

evidence in the defendants' main case to which this is proper rebuttal evidence.

The Court: The prior question was proper. I can't [696] see the propriety in this one, unless you seek to eliminate possible anticipation by yourself, which of course does arise at times.

Mr. Lewis E. Lyon: The only reason for this question, your Honor, is to establish that the linear motion potentiometers manufactured and sold by the Bourns Laboratories do include in all instances the definition of the patent invention to bring it within the fact that those structures, those linear motion potentiometers, which have had such wide commercial success, are the structures of the patent in suit, and defined by the claim.

The Court: Read the question.

(The question was read by the reporter.)

Q. By Mr. Lewis E. Lyon: (Continuing) And a slide element in the body carrying a pressure contact element, and which slide element is mounted to move upon a shaft or bar mounted in the body of the potentiometer.

Mr. Pruitt: The same objection, your Honor, and upon the further ground that it is immaterial.

The Court: I will overrule the objection. You may answer.

The Witness: Now, I have to see how this question is worded.

The Court: All right. Start over again, Mr. Goldstein.

(Testimony of Herbert E. Kidder.)

(The question referred to was read by the reporter as follows: [697])

“Q. Do those Bourns linear motion potentiometers include a lid having a variable resistance element and a shorting strip mounted in the lid, and a slide element in the body carrying a pressure contact element, and which slide element is mounted to move upon a shaft or bar mounted in the body of the potentiometer?”)

The Witness: Yes, they do.

The Court: All right.

Mr. Lewis E. Lyon: That is all.

#### Cross Examination

Q. By Mr. Pruitt: Mr. Kidder, have you examined the file wrapper of the '980 patent?

A. Yes, I have.

Q. Have you read the original claim 13 included in that file wrapper? A. Yes.

Q. Do you know generally what that provides?

A. It is generally similar to the allowed claim in '981, but differs in certain material respects.

Q. And in what respects does it differ from the claim of '981 patent as ultimately allowed?

Mr. Lewis E. Lyon: I believe, your Honor, that is a matter of simple comparison between the claim—— [698]

The Court: I don't know why this is proper for him to do. I have the file wrapper, and it shows what they did. They allowed it right from the beginning and merely objected to the inadequacy of



(Testimony of Herbert E. Kidder.)

drawings. In fact, it is one of the shortest file wrappers I have ever seen.

Mr. Pruitt: I am speaking of the '980 file wrapper in which the original——

The Court: I know. That one was a short one, too. And this division came out of that one.

Mr. Pruitt: Your Honor, the claim of the '981 patent was stated by the applicant to be substantially the same as claim 15 of the original application.

The Court: He didn't put it that way in his application. He merely said it is a division. I will tell you what his wording is. In his letter of transmittal he says—just a minute.

"It is substantially a copy of claim 15 of the parent case, drawn to the non-elected species." I don't know what that phrase means. What does it mean?

Mr. Pruitt: It means a different invention, different species of invention than that covered in the parent claim.

The Court: What does that non-elected mean? That is a new phrase.

Mr. Lewis E. Lyon: In the file wrapper of the original case there was more than one form of structure shown. The [699] Patent Office required a division. Now, the words "non-elected" mean that in the original case this form of linear motion potentiometer was not elected to be prosecuted in the original application, but was elected to be filed in a divisional application. The words "non-elected"



(Testimony of Herbert E. Kidder.)

refer to the election made with respect to the '980 file wrapper, where that form of structure was taken out of that application and reserved for the divisional application.

The Court: I see. All right.

Mr. Lewis E. Lyon: Isn't that right, Mr. Kidder?

The Witness: That's right.

The Court: It is a new phrase. In 19 years I haven't run across it before, or if I have, I have forgotten it.

Mr. Pruitt: Your Honor, if I may point out in the '980——

The Court: Let's not argue about it. Let's do the arguing later on.

What is pending before the court?

Mr. Pruitt: I asked a question concerning the difference between an original claim in the '980 patent and the claim of the '981 patent.

The Court: In view of my own inquiry I think I will let you ask the question. All right, you may answer.

Mr. Lewis E. Lyon: The only question, your Honor, is to compare the physical written elements in one with the other, and both of them are in evidence. [700]

The Court: He can assist us. Go ahead.

The Witness: I really would have to have a copy of the claim 13 to compare——

The Court: Claim 15.

The Witness: He is now asking about 13.

Mr. Pruitt: There were four claims in the orig-

(Testimony of Herbert L. Kidder.)

inal application relating to the linear motion potentiometer, three of those were abandoned by the applicant, and they relied on a claim substantially the same as a claim 15 in their divisional application.

The Court: Now you are trying to compare it with one that they abandoned, is that correct?

Mr. Pruitt: That is correct, your Honor.

Mr. Lewis E. Lyon: That is just argument, your Honor.

The Court: Let's not argue it. Let's let the witness answer the question, please.

The Witness: The chief distinctions are that the claim 13 has no reference to a post mounted on the shaft to which the contact plate is attached, nor does the conductor strip appear in claim 13.

Q. By Mr. Pruitt: Did you take that difference into consideration in arriving at your opinion as to whether or not the Bourns instruments are covered by the single claim of the '981 patent?

A. Yes, that was taken into consideration. [701]

Q. Are you familiar with claim 14 of the parent application?

A. I have read it. I know that there are differences, but the specific differences I would like to look at.

The Court: All right.

Q. By Mr. Pruitt: Please do that, Mr. Kidder.

A. Claim 14 omits the post and describes the contact plate as being mounted on the shaft. Also, of course, includes the whereby clause that was ob-

(Testimony of Herbert E. Kidder.)

jected to by the Patent Office, the last clause——

The Court: The functional clause?

The Witness: The functional clause of the claim.

The Court: Almost like the famous “which” clause in the Bricker Amendment.

Q. By Mr. Pruitt: Are those the only differences between the original claim 14 and the single claim of the '981 patent as ultimately allowed, Mr. Kidder?

Mr. Lewis E. Lyon: Your Honor, I will object to that. That is a matter of simple comparison as to whether there is any further difference.

The Court: That is all right. He may sum it up for us.

The Witness: I would say that is the only material difference. There are a number of other differences in the general organization of the material and the way it is set up [702] in the claims.

Q. Did you take those differences into account in expressing the opinion that you expressed a few moments ago? A. Yes, I did.

Q. Are you familiar with claim 15 of the original parent application? A. Yes, I am.

Q. Do you know in what manner that differs, if any, from the claim as ultimately allowed in the '981 patent? A. Yes.

Q. In what manner does it differ?

Mr. Pruitt: Your Honor, I might point out that these portions are set forth in the trial memorandum on page 13.

(Testimony of Herbert E. Kidder.)

The Court: I know, but I prefer to go by the entire file wrapper.

I think the Examiner set forth the distinction and evidently accepted the claim, because that is one of the few instances that I know of where it was allowed on the first shot. All that he asked for was a better drawing.

Mr. Pruitt: Your Honor, we are going to argue the matter later, but the file wrapper shows that similar claims were previously rejected by the Patent Office. [703]

The Court: The old claims, that is right.

Mr. Lewis E. Lyon: They weren't claims in this application. There is no file wrapper estoppel that follows from that; none whatsoever.

The Court: No. They can see the light, gentlemen, even if it takes them three years to do it, and they eventually come out with something. I know what the file wrappers usually show. They start out with something, and talk back and forth, and the lawyers argue, everybody argues, and, finally, they come out with something and they say, "This is allowed" and you end up with about half the claims.

There is also one little characteristic thing in that one file wrapper. You see, I have a sort of proofreader's eye, and sometimes little things saute aux yeux, as the French say, sort of jump out at you. They said, "Please limit your claims to not more than ten." In other words, they do not like



(Testimony of Herbert E. Kidder.)

multiple claims. So there may be that motivation behind the rejection, that they do not like so many claims. So, finally, when they limited it to seven, they pull this one out, and they say, "We will give it to you."

All right. Go ahead.

The Witness: Among the differences between claim 15 and the allowed claim of '981 is that claim 15 stated that the post extends out of the groove and serves to prevent [704] rotation of the shaft, and is estopped on the limits of shaft reciprocation.

Also, the elongate strip is not described as an electrically conductive elongate strip, which was objected to by the examiner. And the "whereby" clause was objected to at the end of the claim 15, and that was omitted from the claims of '981.

The Court: So that the single claim allowed has fewer elements?

The Witness: It has fewer elements. It is slightly shorter, but contains substantially the same material.

Q. By Mr. Pruitt: You say it was substantially the same as far as the structure described therein in concerned?

A. Except for the differences that I have described, namely, that the post extends out of the groove and serves to prevent rotation of the shaft, and to limit the shaft reciprocation.

Q. Did you take those considerations into ac-



(Testimony of Herbert E. Kidder.)

count in expressing the opinion you testified to a few moments ago?           A. Yes, I did. [705]

\* \* \* \* \*

[Endorsed]: Filed November 8, 1954.

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[Title of District Court and Cause.]

EXTRACT FROM HEARING ON MOTION TO  
STAY OR MODIFY INJUNCTION

Los Angeles, Calif., Monday, Nov. 8, 1954

\* \* \* \* \*

The Court: As I understand that section, we are not ousted from jurisdiction to determine the validity of patents. The Court of Claims is not authorized to pass upon the validity of patents. The section merely says that for damages to be recovered they have to go to the Court of Claims. But that does not prevent me from enjoining them from selling to the Government if, as I found, it is a deliberate infringement. There was no attempt made not to. Your only contention was that hazy contention that it was in the prior art. The man went out deliberately and took it. He was not even skilled in the field. He was just a mechanic, and not an engineer.

I don't know that that section ousted jurisdiction in the courts of the United States to determine patents. Of course, it is true, and I have so held myself, that even when you issue a mandatory in-

junction, you have the right to stay its effect in order not to prevent a person having the benefit of an appeal. But that is done only upon filing a substantial supersedeas bond. A provision such as you demand is really an encouragement. He could go out and say, "Look, we have got authorization to sell all we want to," despite the fact that the judgment would be violated. That would make a mockery of my judgment.

Mr. Warner: That is not intended, your Honor, and none would result.

The Court: But you have gone out and solicited, and you have not got a piece of paper here in showing any authorization by the Government, or that anyone authorized by the Government has stated that they are so willing to buy yours instead of the other that they authorize anyone to prefer that one over the other. After all, you are an infringer.

Mr. Warner: I understand, your Honor, but, if it please the court, that evidence was offered at the trial, and was refused to be admitted.

The Court: I wasn't interested then, and I am not interested in it now.

\* \* \* \* \*

I am old-fashioned. I believe that a patent is still a good right, and I believe that this was a deliberate infringement by one who could not even claim a skill in the art, because he went out and deliberately took something from his former employer. He surrounded himself, it is true, with men skillful enough to help. He was not even an engi-

neer. His experience, he said at the trial, had been obtained in the Navy.

And here is a man who had an invention, which I found was infringed, and I am not going to do aught unless there be a substantial supersedeas bond.

I am not going to put a clause in that injunction, because that would deliberately allow them to go out and do that very thing. If at all, I would tell them not to solicit. I would put in a provision not to solicit or sell. Otherwise they could say, "Boys, we have a cinch. We have got a bond up for \$2,000, and we can sell \$100,000 worth of goods to the United States Government, and then let them go and sue us in the Court of Claims." That is not the way the process of the court should be used. I have been too long at this game. It is true that there are certain things you cannot do, but you can prevent a man from doing certain things that would compel him to go to the Court of Claims, and that has always been the method used in courts of equity. And this is a court of equity now. I would not give you a thing like that. It would just be an invitation to go out and solicit unlimitedly, and any contractor who would be shown a provision of that character would say, "Why, we do not run any risk." I am not going to do that and nullify the judgment of this court.

You are not getting a supersedeas from me unless there is a hearing, in which I am told the total amount in money of all sales, and I will make it cover the whole amount, so that they won't have

to go to the Court of Claims. It is true I cannot make it to cover damages in this court, but I can use the injunctive power to prevent them from going out and increasing the damage, such as a court of equity has always done, and I have illustrated how we do it in divorce cases, where, while you cannot control property outside of the State, you can control the man who owns the property and use the process of the court to tell him to deliver a deed conveying the property, and no court of the United States has ever repealed that.

In fact, I have just completed a case for the Court of Appeals, involving a fight over an estate, and I ran across those cases, and I say in the footnotes that while it is true the court has no jurisdiction to control property outside of the State, it can through orders issued to the person before it compel conveyance even of property outside of the State. So having given the plaintiff the benefit of the judgment, I am not going to do anything to nullify it. If you want a supersedeas bond, you will have to have a bond to cover all future sales, including the Government, and an agreement that that bond be made to cover any future damages as to those. In other words, I will make you waive the benefit of that section, and I can do it. Otherwise, you can go to the Court of Appeals. I have just come from there, and you can ask them to fix the supersedeas bond.

\* \* \* \* \*

[Endorsed]: Filed November 29, 1954.



[Endorsed]: No. 14578. United States Court of Appeals for the Ninth Circuit. Edcliff Instruments, a corporation, Edmund W. Pitzer and Clifford Dillon, Appellants, vs. Marlan E. Bourns, doing business as Bourns Laboratories, Appellee. Transcript of Record. Appeal from the United States District Court for the Southern District of California, Central Division.

Filed: November 13, 1954.

/s/ PAUL P. O'BRIEN,  
Clerk of the United States Court of Appeals for  
the Ninth Circuit.

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In the United States Court of Appeals  
for the Ninth Circuit

No. 14578

EDCLIFF INSTRUMENTS, EDMUND W.  
PITZER, and CLIFFORD DILLON,  
Defendants and Appellants,  
vs.

MARLAN E. BOURNS,  
Plaintiff and Appellee.

NOTICE OF MOTION FOR AN ORDER TO  
SUSPEND INJUNCTION PENDING DE-  
TERMINATION OF APPEAL

To Marlan E. Bourns, Plaintiff-Appellee, and to  
Messrs. Lyon & Lyon, his Attorneys:

Please Take Notice that on Monday, November



29, 1954, at the hour of 10:00 o'clock a.m., or as soon thereafter as counsel can be heard, in the courtroom of the United States Court of Appeals for the Ninth Circuit, in the United States Post Office and Court House Building, Spring and Temple Streets, Los Angeles, California, the appellants, Edcliff Instruments, a corporation, Clifford Dillon, and Edmund W. Pitzer, will move the above entitled court for an order to suspend, pending the disposition of the appeal herein, the injunction issued herein by the United States District Court for the Southern District of California, Central Division, upon the grounds (1) that said District Court had no jurisdiction to issue said injunction by reason of the provisions of Section 1498 of Title 28 of the U. S. Code; (2) that said District Court erred in excluding evidence that the purchase of devices from appellants by contractors and subcontractors of the United States was with the authorization and consent of the United States; (3) that the enforcement of said injunction, pending the appeal herein, would cause appellants substantial, immediate, and irreparable injury, whereas, appellee is adequately secured, pending the instant appeal, without the necessity of said injunction; and (4) that the enforcement of said injunction would immediately deprive the United States of its source of supply of vital defense materials and would thereby nullify the protection afforded the United States by said Section 1498 of Title 28 of the U. S. Code.

Said motion will be based upon Rule 62(g) of

the Federal Rules of Civil Procedure, the Memorandum of Reasons and Points and Authorities, and the affidavits of J. E. Coates, Walter J. Jason, Leonard Comegys, Anton Toy, Jr., and Edmund W. Pitzer, filed concurrently herewith; the affidavits of J. E. Coates, Leonard Comegys, and Walter J. Jason, filed below on September 3, 1954 (R. pp. 115, 132, 134); the affidavits of Raymond E. Bossarte, Leonard Comegys, Ed Deardorff, Clifford Dillon, Clyde V. Grant, Jr., Marion J. Kruzic, Frederick E. MacArthur, Jr., Edmund W. Pitzer, and John C. Werner, each filed below on January 15, 1954 (R. pp. 59, 61, 64, 66, 73, 75, 77, 80, 86, 88), and upon all the evidence, papers, and records on file herein.

Dated: November 19, 1954.

GIBSON, DUNN & CRUTCHER,  
SAMUEL O. PRUITT, JR.,  
F. DANIEL FROST III.,  
GLENN WARNER,

/s/ By SAMUEL O. PRUITT, JR.,  
Attorneys for Defendants and  
Appellants

[Endorsed]: Filed November 19, 1954. Paul P. O'Brien, Clerk.

[Title of U. S. Court of Appeals and Cause.]

AFFIDAVITS OF WALTER J. JASON, J. E.  
COATES, LEONARD COMEGYS, ANTON  
TOY, JR., AND EDMUND W. PITZER IN  
SUPPORT OF APPELLANTS MOTION TO  
SUSPEND INJUNCTION PENDING DE-  
TERMINATION ON APPEAL

AFFIDAVIT OF WALTER J. JASON

State of California,  
County of Los Angeles—ss.

Walter J. Jason, being first duly sworn deposes  
and says:

That he is Patent Director for Convair (formerly Consolidated Vultee Aircraft Corporation), San Diego, California, and in the normal and ordinary course of his duties he has become familiar with the contents of the records and files of that company relating to the purchase by Convair of potentiometers from Edcliff Instruments, a corporation. Said files reveal:

(1) That all potentiometers heretofore purchased by Convair from Edcliff Instruments have been purchased under and pursuant to one or more of United States Government contracts NORD-F-1492, NORD-11809, NORD-11297, NORD-10706 and NORD-13571; and that all potentiometers to be purchased in the future by Convair from Edcliff Instruments are planned for purchase under and pursuant to one or more of said contracts, and all of said potentiometers will, in any event, be pur-

chased under and pursuant to United States Government contracts which each contain an authorization and consent clause;

(2) That each of said contracts above identified contains the following authorization and consent clause, it being noted that in the authorization and consent clause of each of contract Nos. NORD-11809 and NORD-13571 the word "necessarily" is omitted from paragraph [ii] thereof:

"Authorization and Consent: The Government hereby gives its authorization and consent (without prejudice to its rights of indemnification, if such rights are provided for in this contract) for all use and manufacture, in the performance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract), of any patented invention [i] embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, or [ii] utilized in the machinery, tools or methods the use of which necessarily results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific written instructions given by the Contracting Officer directing the manner of performance."

(3) That all said potentiometers have been or are to be resold to and paid for by the United States Government, and

(4) That all of said potentiometers have either been incorporated or will be incorporated by Con-



vair into devices which have been or will be delivered to the United States, or have been or will be used by Convair for research and development purposes directly in connection with United States Government classified projects.

As more particularly stated in the affidavit of affiant dated August 26, 1954, the United States, represented by the Bureau of Ordnance, Department of the Navy, has specifically authorized and consented to the purchase by Convair of said potentiometers from said Edcliff Instruments.

On November 12, 1954, affiant notified the Chief, Bureau of Ordnance, Department of the Navy, of the Judgment of Infringement entered in the above entitled action and requested a reaffirmation of said authorization and consent to the past, present and future purchases of potentiometers from Edcliff Instruments. In reply to said request, affiant received a written communication from G. D. O'Brien, Patent Counsel, Bureau of Ordnance, Department of the Navy, dated November 16, 1954, which reaffirmed said authorization and consent. Attached hereto and designated Exhibit "A" is a full, true and correct copy of said communication.

/s/ WALTER J. JASON

Subscribed and sworn to before me this 18th day of November, 1954.

EDYTHE G. BEATY,  
Notary Public in and for said  
County and State



## EXHIBIT 'A'

Department of the Navy, Bureau of Ordnance  
Washington 25, D. C.

In reply refer to Ref: O'B:pjc A13-1 (Copy)

Mr. Walter J. Jason, Patent Director 16 Nov 1954  
Consolidated Vultee Aircraft Corp.  
3165 Pacific Highway, San Diego, California

My dear Mr. Jason:

For the purpose of the United States Code Title 28 Section 1498 as amended, the Government of the United States as represented by the Department of the Navy, Bureau of Ordnance, hereby reaffirms the authorization and consent for the manufacture and sale by Edcliff Instruments of linear potentiometers to Consolidated Vultee Aircraft Corporation as previously granted under the following current United States Government contracts: NOrd-F-1492: NOrd-11,809; NOrd-11,297 and NOrd-10,706, and NOrd-13,579 [sic NOrd-13,571].

The provision of the United States Judicial Code noted above states that the patent owner's remedy for the use or manufacture by or for the United States (including a prime Contractor or any lower tier subcontractor of the United States) of any patented invention shall be by way of action against the United States in the Court of Claims for the recovery of his reasonable and entire compensation. Any injunction arising out of the present action brought by Bourns for infringement of U. S. patent No. 2,515,981 by Edcliff Instruments, restraining

the sale by Edcliff of potentiometers held to be infringing valid claims of this patent should exclude sales directly or indirectly to the United States Government or its contractors to be in compliance with the provisions of the above-cited Title and Section of the United States Code.

Accordingly, the purchase by Consolidated Vultee Aircraft Corporation for the use of the United States Government under the above-designated contracts of potentiometers from Edcliff Instruments could be held an infringement of the Bourns patent only by appropriate proceedings in the U. S. Court of Claims. If it were otherwise, the liability of the United States Government could be adjudicated on proceedings in the Federal District Courts, which is contrary to the intent of Congress.

Sincerely yours,

/s/ G. D. O'BRIEN,

Patent Counsel for the Bureau; by direction of the  
Chief of Bureau.

### AFFIDAVIT OF J. E. COATES

State of California,  
County of Los Angeles—ss.

J. E. Coates, being first duly sworn deposes and says:

That he is Chief Patent Counsel for Douglas Aircraft Company, Inc., Santa Monica, California, and that in the normal and ordinary course of his duties he has become familiar with and knows the contents of the records and files of that company relating to

the purchase by Douglas Aircraft Company, Inc. of linear motion potentiometers from Edcliff Instruments.

Said files reveal that all past, present and future purchases of linear motion potentiometers by Douglas Aircraft Company, Inc. from Edcliff Instruments and that all linear motion potentiometers manufactured in the past, present or future by Edcliff Instruments and purchased, or to be purchased by Douglas Aircraft Company, Inc. from Bendix Aviation Corporation, have been or will be purchased under and pursuant to certain United States Government contracts issued by the Ordnance Corps of the Department of the Army and by the Bureau of Aeronautics, Department of the Navy.

Said files further reveal that all of said linear motion potentiometers have been or will be paid for by the United States Government under and pursuant to said Government contracts, and either have been or will be incorporated by Douglas Aircraft Company, Inc. into devices which have been or will be delivered to the United States or have been or will be used by Douglas Aircraft Company, Inc. for research and development purposes directly connected with United States Government projects, all or provided for in said Government contracts.

As stated in the affidavit of affiant dated August 30, 1954 (filed herein on September 3, 1954), the United States has heretofore expressly authorized and consented to the purchase of all of said linear motion potentiometers from Edcliff Instruments

and Bendix Aviation Corporation by Douglas Aircraft Company, Inc.

Furthermore, on November 11, 1954, affiant notified the Chief of Ordnance, Ordnance Corps, Department of the Army and the Patent Counsel, Bureau of Aeronautics, Department of the Navy of the Judgment of Infringement entered by the United States District Court in the above entitled action and requested a reaffirmation of said authorization and consent to the purchase by Douglas Aircraft Company, Inc. of linear motion potentiometers from Edcliff Instruments and from Bendix Aviation Corporation.

Affiant received a written communication in response to said request from J. H. Church, Assistant General Counsel, Office of Chief of Ordnance, Department of the Army, dated November 16, 1954, which reaffirmed said authorization and consent and which stated in addition that:

“Under the Act of June 25, 1948 (28 U.S. Code 1498, as amended) any suit for infringement of a patent by a contractor or by any subcontractor in the performance of a Government contract must be brought against the Government in the Court of Claims and not against the contractor if the Government has given its authorization or consent to the manufacture or use of the patented invention.”

On November 17, 1954, affiant received a written communication in response to said request, from F. J. Schmitt, Patent Counsel, Bureau of Aero-



navies, Department of the Navy, which reaffirmed said authorization and consent.

/s/ J. E. COATES

Subscribed and sworn to before me this 17th day of November, 1954.

[Seal]

CLARA J. KESLER,

Notary Public in and for said  
County and State

### AFFIDAVIT OF LEONARD COMEGYS

State of California,

County of Los Angeles—ss.

Leonard Comegys, being first duly sworn deposes and says:

That he is Divisional Counsel for Bendix Aviation Corporation, Pacific Division, Plant No. 1 at North Hollywood, California, and that in the normal and ordinary course of his duties he has become familiar with and knows the contents of the records and files of that corporation relating to the purchase by it of potentiometers from Edcliff Instruments. Said files reveal that all past, present and future purchases of potentiometers from Edcliff Instruments by Bendix Aviation Corporation, Pacific Division, have been and will be purchased by said corporation in its capacity as subcontractor to Douglas Aircraft Company, Inc. and under and pursuant to United States Government contracts. Said files further reveal that all of said poten-



tiometers have been or will be delivered to Douglas Aircraft Company, Inc. for ultimate delivery to the United States Government or for incorporation into devices manufactured for the United States Government and used by Douglas Aircraft Company, Inc. for research and development purposes directly in connection with United States Government classified projects.

/s/ LEONARD COMEGYS

Subscribed and sworn to before me this 17th day of November, 1954.

[Seal] ELENORE E. RICHARDSON,  
Notary Public in and for said  
County and State

### AFFIDAVIT OF ANTON TOY, JR.

State of California,  
County of .....—ss.

Anton Toy, Jr., being first duly sworn deposes and says:

That he is Legal Staff Assistant in the Material Department, Convair, Division of General Dynamics Corporation (Pomona), and that he knows of his own knowledge the truth of the following statements set forth below:

1. Convair, A Division of General Dynamics Corporation (Pomona) operates the United States-owned Naval Reserve Ordnance Plant in the re-

search, development, and production of classified missiles for the United States.

2. That Convair is the prime contractor under United States contract NOrd 11297 and is producing classified missiles for the United States under said contract.

3. That potentiometers are being purchased by Convair from Edcliff Instruments and said potentiometers are being used in the manufacture of said missiles and are vital components thereof.

4. That at this time no other potentiometer except those purchased from Edcliff Instruments has been approved to meet the technical requirements of these instruments although other sources have been and are being sought.

5. That no other potentiometer except those purchased from Edcliff Instruments could reasonably be expected to be produced, tested, and manufactured in quantities required for Convair missile production in less than several months from this date.

6. That in the event Edcliff Instruments is prevented from manufacturing and/or selling said potentiometers, the production of missiles by Convair would be severely curtailed or entirely interrupted for at least several months, thereby making it impossible to deliver missiles to the United States as required under present commitments, and therefore it is most urgent that Edcliff Instruments continue to supply said potentiometers to Convair.

/s/ ANTON TOY, JR.

Subscribed and sworn to before me this 17th day of November, 1954.

[Seal]

MARGARET D. DALEY,  
Notary Public in and for said  
County and State

## AFFIDAVIT OF EDMUND W. PITZER

State of California,  
County of Los Angeles—ss.

Edmund W. Pitzer, being first duly sworn deposes and says:

That he is Vice President of Edcliff Instruments, a corporation, and that he knows of his own knowledge the truth of the following statements set forth below:

1. As of November 10, 1954, the gross sales price of all unfilled purchase orders in the files of Edcliff Instruments for linear motion potentiometers was \$129,819.12. No additional purchase orders for linear motion potentiometers have been received since said date.

2. Unfilled purchase orders in the files of Edcliff Instruments on said date from Convair, Douglas Aircraft Company, Inc. and Bendix Aviation Corporation issued under and pursuant to United States Government contracts call for the delivery of linear motion potentiometers having a gross sales price of \$124,319.12.

3. Unfilled purchase orders in the files of Edcliff Instruments on said date from purchasers for po-

tentiometers presumably to be devoted to civilian use and not known to be related to United States Government contracts call for the delivery of linear motion potentiometers having a gross sales price of \$5,500.00.

4. Edcliff Instruments, during the pendency of the appeal herein, will not manufacture, sell or deliver any linear motion potentiometers held by the trial court to infringe appellee's patent, under any purchase orders received on and after the date hereof, excepting only those sold and delivered to agencies of the United States Government under and pursuant to United States Government contracts.

/s/ EDMUND W. PITZER

Subscribed and sworn to before me this 18th day of November, 1954.

[Seal]

FRANCES G. ZIEBACH,  
Notary Public in and for said  
County and State

[Endorsed]: Filed November 19, 1954. Paul P. O'Brien, Clerk.



[Title of U. S. Court of Appeals and Cause.]

APPLICATION FOR PERMISSION TO FILE  
TYPEWRITTEN BRIEF AMICUS CURIAE  
BY THE UNITED STATES OF AMERICA  
IN SUPPORT OF MOTION OF APPEL-  
LANTS TO SUSPEND INJUNCTION PEND-  
ING APPEAL; AFFIDAVIT

Comes Now the United States of America by and through its attorneys, Laughlin E. Waters, United States Attorney, Max F. Deutz and Richard M. Darby, Assistant United States Attorneys, and herewith apply for permission to file a typewritten brief amicus curiae in the above-entitled appeal in support of Motion of Appellants to Suspend Injunction Pending Determination on Appeal under the provisions of Rule 18-9(c) of the Rules of the United States Court of Appeals for the Ninth Circuit, on the questions relating to the interest of the Government in the continued supply of devices held by the court below to infringe appellee's patent and in the construction and application of Section 1498 of Title 28, United States Code.

Said application is based upon the affidavit of Richard M. Darby, Assistant United States Attorney, attached hereto, and upon the grounds therein stated.

Respectfully submitted,

LAUGHLIN E. WATERS,  
United States Attorney



MAX F. DEUTZ,

Assistant U. S. Attorney, Chief,  
Civil Division

/s/ RICHARD M. DARBY,

Assistant U. S. Attorney  
Attorneys for the United States of  
America

AFFIDAVIT

United States of America,  
Southern District of California—ss.

Richard M. Darby, being duly sworn deposes and says:

That he is an Assistant United States Attorney for the Southern District of California; Los Angeles, California; and makes this affidavit on behalf of the application of the United States of America, for permission to file a Brief Amicus Curiae in the above-entitled matter on the questions relating to the continued supply of devices held by the Court below to infringe appellee's patent and the interpretation and construction of Section 1498 of Title 28, United States Code.

The action in the District Court was a patent infringement case brought by appellee against appellant.

That both appellant and appellee are suppliers to contractors and subcontractors to the United States of America of certain devices described as potentiometers. That the United States had authorized and consented to the purchase by its contractors and subcontractors from appellants herein of devices

held by the Court below to infringe the appellee's patent. That the national interest of the United States required that appellants continue to be permitted to supply said devices to the United States, its contractors and subcontractors.

That the functions of the United States are therefore affected by any matters relating to the issuance of an injunction by the Court below and therefore has a real interest in presenting to this Court a Brief Amicus Curiae on any questions relating to interest of the Government in the continued supply of devices held by the Court below to infringe on the appellee's patent in the construction and application of Section 1498 of Title 28, United States Code.

That the United States Attorney for the Southern District of California was not advised of the status of the action in the Court below until November 17, 1954, and therefore made no appearance in the Court below.

/s/ RICHARD M. DARBY

Subscribed and sworn to before me this 26th day of November, 1954.

[Seal] EDMUND L. SMITH, Clerk  
United States District Court, Southern District of  
California.

By L. CUNLIFFE, Deputy Clerk  
Affidavit of Service by Mail attached.

[Endorsed]: Filed November 29, 1954. Paul P. O'Brien, Clerk.

[Title of U. S. Court of Appeals and Cause.]

BRIEF AMICUS CURIAE OF THE UNITED  
STATES OF AMERICA IN SUPPORT OF  
APPELLANTS' MOTION TO SUSPEND IN-  
JUNCTION PENDING DETERMINATION  
OF APPEAL

Statement of Government Interest

The clerk of the court below has issued a Writ of Injunction in furtherance of the trial court's interlocutory judgment of valid patent and patent infringement, enjoining appellants from selling or attempting to sell any of the devices held by the court to infringe appellee's patent. Substantially all of the past and contemplated future sales of the infringing devices by appellants have been and are to the United States and to its contractors or subcontractors with the authorization and consent of the United States.

Section 1498, of Title 28 of the United States Code provides in pertinent part:

“§ 1498. Patent cases

Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

For the purposes of this section, the use or manufacture of an invention described in and covered by a patent of the United States by a contractor, a subcontractor, or any person, firm, or corporation for the Government and with the authorization or consent of the Government, shall be construed as use or manufacture for the United States."

\* \* \* \* \*

It is the contention of the Government that said section prohibits the District Court from granting appellee any relief whatever, either by injunction or otherwise with respect to such sales. Unless the injunction is suspended pending the appeal herein the whole purpose of Section 1498 to assure the Government of an uninterrupted supply of vital materials would be defeated.

In order to forestall the imminent possibility of service of the Writ of Injunction issued on the court below and the grave danger that would result to the national interest should there be an interruption in the supply of the infringing device now being supplied by the appellants, the United States Attorney for the Southern District of California has been instructed by the Attorney General of the United States to appear in this court as *amicus curiae* in Support of Appellant's Motion to Suspend Injunction Pending Determination of the Appeal.

### Argument

Appellants and appellee manufacture a device known as a linear motion potentiometer. Substanti-



ally all of said devices produced by appellants are sold either to the Government directly or to its contractors and subcontractors. The potentiometers are a vital component of guided missiles produced as a part of the defense program.

The trial court found that appellants' device infringed upon appellee's United States Patent No. 2,515,981. An interlocutory judgment has been issued, restraining appellants from "using, or causing to be used, or offering, or threatening to use, or selling or offering for sale, or threatening to sell or contribute to the use of the combination patented in and by said Letters Patent No. 2,515,981."

In the event of an interruption in the supply of potentiometers by appellants, there will be a delay in the defense program of the Government.

Section 1498 of Title 28, United States Code is clear. It provides that the patentee's sole remedy for an alleged infringement of his patent arising out of the manufacture and sale of a device to the United States or to a contractor or subcontractor thereof shall be by an action against the United States in the Court of Claims. The courts have uniformly and without deviation held this remedy to be exclusive.

Accordingly, in order to insure the uninterrupted supply of vital components in the national interest, and in light of the obvious and adequate legal remedy of appellees under the provisions of Section 1498, Title 28, of the United States Code, it is submitted that the injunction issued by the court below insofar as it applied to devices used or manufac-



tured by or for the United States, its contractors, subcontractors, or any person, firm or corporation for the Government and with the authorization or consent of the Government should be suspended on the instant motion of appellants pending determination of their appeal herein.

Respectfully submitted,

LAUGHLIN E. WATERS,

United States Attorney

MAX F. DEUTZ,

Assistant U. S. Attorney, Chief,

Civil Division

/s/ RICHARD M. DARBY,

Assistant U. S. Attorney

Amicus Curiae

Affidavit of Service by Mail attached.

[Endorsed]: Filed November 29, 1954. Paul P. O'Brien, Clerk.

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[Title of U. S. Court of Appeals and Cause.]

## ORDER

Motion for an Order to Suspend Injunction  
Pending Determination of Appeal

Before: Stephens, and Chambers, Circuit Judges,  
and McLaughlin, District Judge.

On the 29th day of November, 1954, plaintiff-appellee's motion to this court for order to suspend

injunction pending determination of appeal was submitted to this court for decision;

And, this court now being fully advised, hereby denies the motion without prejudice for the reason that the record does not reveal that an injunction has issued or is about to issue in or out of the above entitled action.

/s/ ALBERT LEE STEPHENS,

/s/ RICHARD H. CHAMBERS,

United States Circuit Judges

/s/ J. FRANK McLAUGHLIN,

United States District Judge

[Endorsed]: Filed December 3, 1954. Paul P. O'Brien, Clerk.

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[Title of U. S. Court of Appeals and Cause.]

## STATEMENT OF POINTS UPON WHICH APPELLANTS INTEND TO RELY

Appellants Edmund W. Pitzer, Clifford Dillon and Edcliff Instruments intend to rely upon the following Points in support of their appeal from the judgment of the United States District Court below:

1. The District Court erred in denying the Motion of defendants and appellants for a Partial Summary Judgment and for an Order of Direction as to further proceedings.
2. The District Court erred in finding and ad-

judging that United States Patent No. 2,515,981 is valid.

3. The District Court erred in finding and adjudging that United States Patent No. 2,515,981 is infringed by the Model D-1, Model A-1, Model B-1, Model XP, Model L, Model E-1 or Model F-1 potentiometers manufactured by defendants and appellants, or by any of said models.

4. The District Court erred in refusing to find and adjudge that the Model B-11 potentiometer manufactured by defendants and appellants does not infringe United States Patent No. 2,515,981.

5. The District Court erred in refusing to find and adjudge that the Model B-12 potentiometer manufactured by defendants and appellants does not infringe United States Patent No. 2,515,981.

6. The District Court erred in finding and adjudging that the Fourth Counterclaim of defendants and appellants for a declaratory judgment with respect to the validity and infringement of United States Letters Patent No. 2,515,981 be dismissed.

7. The District Court had no jurisdiction to enjoin the sale by defendants and appellants of potentiometers to the United States or to its contractors or subcontractors within the meaning of Section 1498 of Title 28 of the United States Code, and the District Court erred in refusing to exclude such sales from the portion of the Interlocutory Judgment providing that plaintiff and appellee was en-

titled to injunctive relief and in ruling that evidence of sales by defendants and appellants of potentiometers to the United States, its contractors or subcontractors within the meaning of Section 1498 of Title 28 of the United States Code, was not material and would not be considered by the said District Court in advance of a hearing before the Master on the issue of damages resulting from the claimed infringement of United States Letters Patent No. 2,515,981.

8. The District Court erred in awarding a Judgment to plaintiff and appellee for his taxable costs.

9. The District Court erred in making its Finding of Fact X in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

10. The District Court erred in making its Finding of Fact XI in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

11. The District Court erred in making its Finding of Fact XII in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

12. The District Court erred in making its Finding of Fact XIII in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

13. The District Court erred in making its Find-

ing of Fact XIV in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

14. The District Court erred in making its Finding of Fact XV in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

15. The District Court erred in making its Finding of Fact XVI in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

16. The District Court erred in making its Finding of Fact XVII in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

17. The District Court erred in making its Finding of Fact XVIII in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

18. The District Court erred in making its Finding of Fact XIX in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

19. The District Court erred in making its Finding of Fact XX in that said Finding of Fact is clearly erroneous and is not supported by the evidence.

The findings of fact referred to in the foregoing



items 9 to 19, inclusive, are set forth at pages 164 to 165 of the Certified Record on Appeal.

Dated: December 3, 1954.

GIBSON, DUNN & CRUTCHER,  
/s/ By SAMUEL O. PRUITT, JR.,  
Attorneys for Defendants and Appellants, Edcliff  
Instruments, Edmund W. Pitzer, and Clifford  
Dillon.

[Endorsed]: Filed December 6, 1954. Paul P.  
O'Brien, Clerk.

